





# BULLETIN No. 70

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Two railroads will celebrate their centennials this year—the Monon, a railroad that is well known and is in every sense a part of the Hoosier state, and the St. Lawrence and Industrie Village Ry., a small road, but it is now the oldest operating part of the Canadian Pacific Ry. The paper on the Monon was prepared by Mr. V. A. Hewitt, Treasurer and Assistant to the President of the Monon and was read before our Chicago Chapter. It was deemed worthy of a place in your publication. The paper on the St. Lawrence and Industrie Village Ry., was prepared by Mr. Robert R. Brown, an authority on Canadian railways.

In this connection we welcome the recollections of Mr. Donald R. MacBain on the old Canada Southern Ry. This road, now a part of the New York Central System, is still one of the fastest stretches of track in that huge railroad. We appreciate Mr. MacBain's efforts and we hope our membership will enjoy his recollections.

Another one of our members, Mr. C. F. H. Allen has contributed some notes on the Buffalo & Susquehanna R. R., now part of the Baltimore & Ohio R. R., Stewart Graham has made a contribution on the numbering of the Lackawanna locomotives and Mr. G. M. Best has contributed some notes on the Milford, Matamoras & New York R. R.

Lastly, our New York Chapter has had several speakers covering the history of the many locomotive builders in this country. Mr. Lawrence W. Sagle recently prepared and read before one of their meetings, a paper on that interesting and not too well known builder — Ross Winans of Baltimore. We are glad to be able to reproduce it in this bulletin and we hope that it will appeal to our membership.

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## Cover Design

One of our younger members — Mr. Robert J. Powers, has submitted the cover design used on this bulletin. It represents one of the big Mallets of the Northern Pacific emerging from one of the many tunnels on that road. These huge locomotives certainly fill the tunnel with but little room to spare.

Robert is one of our younger and newer members. He saw service in the South Pacific with the U. S. Marines. After receiving his honorable discharge, he married the young lady of his choice and now he is catching up on his education here in Boston. Always interested in the "iron horse" and all that relates to it, he has tried to catch the workings of these huge locomotives and we hope that our membership will enjoy his sketch.

# Ross Winans

By L. W. SAGLE

*Paper read before the New York Chapter, R. & L. H. S., Feb. 21, 1947.*

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Ross Winans, inventor and mechanic, was born on a farm in Sussex County, New Jersey, on October 17, 1796. He was the sixth in descent from Jan Wynants, who came to America from the Netherlands in about the year 1662. He was the seventh child of William and Mary Winans, who were first cousins.

He received a good, common school education and later, while on a journey to New York City, he picked up a book which led him to study mechanical principles, and that was to alter his entire future outlook on life.

The Winans family were horse-raising experts and, in 1828, we find Ross Winans in Baltimore with the express purpose of selling horses to the new Baltimore and Ohio Railroad.

Ross Winans became very much interested in the problems of the new system of transportation and bringing his mechanical genius to bear, devised a model rail wagon, having friction wheels with outside bearings, thus setting, at that early date, a distinctive pattern for railroad wheels for at least a century.

Pangborn tells us that this model car weighed 125 lbs., and was demonstrated to the public in the Chamber of Commerce in Baltimore, where Winans placed 500 lbs. of iron and two men in the car and then drew the entire load with a piece of twine. Hungerford, in his history, tells us that he also was able to move this car by suspending a half-pound weight, from a pulley, in a stair well of the Exchange Building. Charles Carroll of Carrollton, who laid the corner stone of the Baltimore and Ohio Railroad, was induced to come to see the car, and greatly marveled at it. It is further stated that the aged gentleman seated himself in the tiny car and was as "pleased as Punch" when the small weight, working over the pulley, drew him along the track.

At that early date, Winans was a great believer in protection of the patent office, and immediately secured a patent on the entire car, including wheels, axles and carriage.

According to the Franklin Institute Journal, Volume 9, Winans invented and patented an improvement in the construction of axles, or bearings, on July 20, 1831. This was the earliest use of outside journals in America and experiments with them were made on the Baltimore and Ohio and on the Liverpool and Manchester Railroads. Obviously, it was from the experiments made by the latter railroad that led to the adoption of this type of wheel in England.

On this experimental model car used at the Baltimore Chamber of Commerce, the flanges were on the outside of the wheel. Winans must have soon realized the impracticability of this and shortly afterward moved the flanges to the inside.

Undoubtedly, Ross Winans was possessed of a very keen mind because as early as 1829, he was the first to point out the advantage of coned wheels on railways, as well as the first to employ outside, instead of inside, journals on axles.

There is no doubt that by this time, Winans was closely associated with the new enterprise, because, in 1828, in conjunction with William Patterson and George Brown, we find him presenting a memorial to Congress asking for help for the Baltimore and Ohio Railroad.

Shortly afterward, Winans was on his way to England, in the company of George Whistler, J. Kingle and A. G. McNeil, to study the railroads there at the behest of the Baltimore and Ohio. While abroad he allowed his patent friction wheel to be used for experimentation by the railroads there, with the result that he was ruthlessly plundered of its most valuable feature. It seems that the English appropriated his design and, very likely due to the lack of proper international patent laws at that time, he was never able to collect any royalties.

Upon his return from England, he entered the service of the B & O Railroad as engineer, and one of his first and most important acts was to assist Peter Cooper in the building of the Tom Thumb locomotive.

Upon the completion of the successful trial of the Tom Thumb, in 1830, Winans was very much impressed with its performance. At that time, he expressed it as his opinion that the Tom Thumb was greatly superior to Stephenson's Rocket, basing his opinion on the fact that the Tom Thumb was able to round the shortest curves at a speed of from 15 to 18 miles per hour and that, further, in being able to ascend grades of nearly 20 ft. to the mile, definitely established its superiority, especially as the Rocket weighed six times as much as the Tom Thumb and, for its trial test, had a perfectly straight and level track. Winans must have gotten a great deal of personal satisfaction from the success of the Tom Thumb as undoubtedly he had a great deal to do with the building of this locomotive.

In 1831, Winans was appointed assistant engineer of machinery on the B & O and we next find him working closely with Davis to improve his prize-winning locomotive, the "York", which he had brought from York, Pa., by wagon to Baltimore, to compete in the Baltimore and Ohio prize contest of that year. Although the "York" locomotive had won the first place prize, the outside cylinders and cranks were not very efficient. There is no question that Winans' suggestions resulted in the remodeling of this locomotive. This greatly simplified its working parts and increased its efficiency.

In 1829 his friction wheel was used on the experimental sail car that was built by the Baltimore and Ohio Railroad. Visiting Russian ambassadors were so impressed that they took a model back to Europe

with them, which very likely, led to the decision of that nation to begin construction of the St. Petersburg and Moscow Railroad, and on which the Winans family was to figure largely in subsequent years.

In 1831 there were a number of English locomotives imported into the United States. However, the method of construction used on English and American railroads differed greatly. Over there, the lines were comparatively straight and the landscape was altered to suit the railroad. In America, the railroads more or less followed the contour of the land and made wide detours to avoid construction of tunnels and high embankments. Consequently, the large wheels and rigidity of the English locomotives caused them to derail frequently. This was true of the "Herald", a Stephenson locomotive, which had been bought and placed in service on the Baltimore and Susquehanna Railroad, in 1831. This locomotive would not stay on the track, so Ross Winans was called into consultation to correct the trouble. Winans remodeled this locomotive by removing the front wheels, placing a pony truck under the front, and substituting smaller wheels. This places Winans well in advance of other locomotive designers in the use of pony truck, although John B. Jervis had reached the same conclusion, at about the same time, with regard to the Mohawk and Hudson locomotive, the "Robert Fulton", another English locomotive.

The year 1831 was a great pioneer year for Ross Winans because, among other things, it was in that year that he built the "Columbus", his first double-truck car.

Descriptions of this car which have come down to us are rather vague and contradictory. However, the description which we find in Brown's "History of the First Locomotive in America," states that this car was a large box, such as any carpenter could make. It had a 4-wheel truck at either end and it had seats on the top like other cars previously used, which were reached by a ladder at one of the corners.

Following his custom, Winans immediately patented the double truck car although he was not the first actually to build one of that type. According to available historic records, Gridley Bryant actually designed the first 8-wheel car in America for the Granite Railroad of Quincy, Mass., in 1826. Bryant's car was not actually a car in the sense that Winans was as it was only a combination of two 4-wheel trucks connected by stringers for transporting long pieces or columns of granite. A great many railroads in those early years took advantage of this fact and built 8-wheel cars without paying Winans a royalty. This resulted in Winans instituting court actions against these railroads in 1834. This litigation over the movable truck lasted five years, and cost, it is said, \$250,000.00. Although Bryant had never patented his trucks, the court finally decided in his favor but not before Winans had made immense sums from his patents. It is stated Ross Winans died worth over twenty million dollars, while Bryant, who had not patented his devices and had no legal rights to royalties, had never received a cent for his invention. The testimony covering the court proceedings in these long-drawn-out suits is contained in a large volume which is available to any historian who wishes to pursue the matter further.



Following the "Columbus," Winans built another 8-wheel car, in 1833, the "Winchester," and the "Dromedary," the third car, in 1834.

However, before building his second 8-wheel passenger car, Winans built an 8-wheel freight car for the B & O in 1831. This, as far as we know, is the first double truck freight car and was used for hauling wood.

In 1835, Winans, in partnership with George Gillingham, took over the control of the company shops at Mt. Clare and continued the manufacture of locomotives and railroad machinery begun by Phineas Davis. They were bound by contract to supply the company with locomotive engines and all other railroad machinery at a stipulated price, and at all times to give precedence to the company's demand for work. They had the use of the ground and buildings, with the fixed machinery left by Davis, without rent, being bound, however, to keep the same in repair and return them in the same condition in which they had been received. In consideration of this concession, they were able to manufacture the company's engines so much below the market price that the arrangement was of great benefit to the Baltimore and Ohio Railroad.

The year 1837 saw Winans taking out patents on his "crab" locomotive, which was a radical departure from the Davis "grasshoppers" in that the cylinders were now placed in a horizontal position and bolted to the outside frame, although still using the vertical boiler which the early mechanical engineers claimed had better steaming qualities than the horizontal boiler but which, obviously, could not be made large enough as engines increased in size and weight. One of the curious things about the early "crab" engine was the use of a feed water heater. The 14th annual report of the Baltimore and Ohio Railroad, in 1840, states that, of eleven new engines purchased during that year for use on the Main Stem, eight appeared to be "coal crabs." Historians, however, take exception to this and most authorities agree that only two of these "crabs" were ever built for the Baltimore and Ohio Railroad and that the other engines mentioned were "grasshoppers" of the Davis design.

The next important development in locomotive design by Winans was the 8-wheel connected freight locomotive. The 18th annual report of the Baltimore and Ohio Railroad, published in 1844, states that Ross Winans, whom they describe as an "ingenius mechanic of Baltimore," as late as 1842 had not only designed but constructed an engine weighing 20 tons, running on 8 wheels, all of which were drivers, and with the weight equally distributed over the wheels, capable of hauling 1100 tons over a level and straight road, while over grades of 82½ ft. to the mile, with curvatures of 1000 ft. radius, it could haul 870 tons at a rate of 8 miles an hour.

These engines, however, were not built by Winans himself, but were no doubt those built by Baldwin under special arrangement with Winans for the Western Railroad of Massachusetts. He did, however, build twelve of these locomotives for the B & O between the years 1844 and 1846. The three built by Baldwin for the Western Railroad of Massachusetts were probably the last that Winans designed with the vertical



boiler because, in his "Report on the Use of Anthracite Coal in Locomotive Engines on the Reading Railroad," made by George W. Whistler, Jr., of 1849, he states that in October of 1844, Ross Winans had produced the first successful coal-burning engine with a horizontal boiler. The report further states that the twelve engines built for the Baltimore and Ohio Railroad between October, 1844, and December 1846, were of this type. These locomotives had frames outside of the drivers with the cranks and connecting rods outside of the frame. The cylinders were mounted above the wheels at the forward end of the frame and the main rod operated a crank which was connected to the side rod crank by gears. This resulted in the main rod travelling in an opposite direction to the side rods.

Although Winans had patented the original "mud-digger" locomotive, he was not the inventor of the 8-wheel type locomotive. There was one in use at the Wylam Collieries in England as early as 1815. The British engine, however, was not coupled but propelled by spur gears.

Although Ross Winans never placed much stock in the pony truck, there are occasions when he used it. He placed one on the Baltimore and Susquehanna Railroad locomotive, as previously mentioned, and later on the "Centipede," and we also have records of his building three 4-4-0 locomotives for the Baltimore and Ohio — the "Atalanta" in 1843, the "Reindeer" in 1845 and the "Juno" in 1848. These were of the same general design as the Eastwick and Harrison engines, several of which were placed in service on the B & O between 1840 and 1842 and were probably built at the insistence of the Baltimore and Ohio management.

Undoubtedly, the arrangement that Gillingham and Winans had with the Baltimore and Ohio for the operation of their Mt. Clare shops did not give them as free a hand as they would liked and curtailed their profits. Therefore, in 1843, it is recorded that they built their own locomotive shops adjacent to the Mt. Clare Station. Many of our historians have stated that this plant was on Pratt Street across from the Mt. Clare shops. They could not have been on the north side of Pratt Street because the houses there were built during the time or before the Winans' plant was constructed. A search through a great many of the old directories of Baltimore revealed that these shops were built at the northeast corner of Poppleton and McHenry Streets, but were later expanded until they reached Pratt Street. This plant has long since been dismantled and the site is now occupied by a grain elevator and team tracks of the Baltimore and Ohio Railroad which occupies the entire block bounded by Pratt, Poppleton, McHenry and Parkin Streets. On the east side of Parkin Street, adjacent to this lot, is the great plant of Bartlett Hayward & Company, now a division of the Koppers Company, which many years ago, under the name of Hayward, Bartlett & Company, also built locomotives in Baltimore.

Probably the most astounding engine that Winans ever built was the "Carroll of Carrollton." Built in 1843 for the Boston and Worcester Railroad, this was the first locomotive in America with a single pair of drivers 7 ft. in diameter. In the design of this locomotive, Winans intro-

duced a device whereby, when a grade was reached, the weight shifted from the trucks and concentrated on the drivers. It is said that the valve motion was of a peculiar type and had a stroke of no less than 48 inches. This locomotive proved to be so fast that her speed could not be fully tested on any line in the country. The trial trips made on the Baltimore and Ohio's Washington Branch demonstrated that there was almost no limit to her speed; and, according to Pangborn, she, could not be fully let out for fear she would jump the track. Later, according to the same source, while in service on the B & W road, she frightened not only the natives but also her engineer and fireman by her terrific burst of speed when now and then she was cautiously opened up.

In his book, "The World's Railway," Pangborn states that the "Buffalo," which he calls the first 8-coupled locomotive in the world, was an experimental engine and was never owned by the B & O Railroad.

The year 1844 marked the founding of the Hayward, Bartlett Company in Baltimore. This began as a stove foundry, but later assumed the grand title of "Architectural Iron Works." It is recorded that for several years, beginning in 1863, this firm also conducted the whole vast business of the Winans locomotive works.

George Whistler, who had been an army engineer, was obviously a close friend of Ross Winans. Whistler had gone to St. Petersburg in 1842 and in 1843, doubtless through his influence, Ross Winans was invited to go to Russia to build rolling stock for the projected St. Petersburg and Moscow Railroad. He declined, but sent his sons, Thomas and William, in his stead. This resulted in the formation of the firm of Harrison, Winans and Eastwick which entered into a contract with the Russian Government to build and maintain rolling stock for the new railroad, and to establish shops along the lines as the railroad progressed. The first shop, near St. Petersburg, was called "Alexandrovsky." The contract was dated August 25, 1850, and was signed by Joseph Harrison, Thomas D. Winans and William L. Winans.

While Winans' two elder sons were busy in Russia, he was occupying his time suing a number of railroads for infringement of his patent for the 8-wheel car, as previously stated. Among the railroads which he sued were the New York and Harlem, the Eastern Railroads, New Castle and Frenchtown, and the Schenectady and Troy.

He was also busy building "camel" locomotives for the B & O Railroad, the first of these huge 0-8-0 engines having been built in 1848. Between 1848 and 1857 Winans built 119 of these large freight engines for the Baltimore and Ohio Railroad.

One of the interesting things about the first "camel" was the fact that he introduced for the first time, according to Pangborn, a cam cut-off instead of eccentrics. Other innovations were outside horizontal cylinders and coupling rods of flattened section with solid stub ends. The 8 coupled driving wheels were 43" in diameter and the wheel base, 11'3". Other features of these "camels," including the wide fire-box overhanging the back wheels, the large dome about midway of the boiler shell, the

cab perched on top of the boiler, etc., are familiar to most railroad historians. A more thorough description of the three types of "camels" which he built can be found in Snowden Bell's book on "The Early Motive Power of the Baltimore and Ohio Railroad."

In 1846, Winans built the locomotive "Delaware" for the Reading Road and Pangborn states that it was his first perfected 8-wheel engine for burning Anthracite coal and with the introduction of it and the "Maryland on the line," that company's hitherto maintained practice of burning wood to bring coal to market was abandoned."

In spite of the huge success of the Winans locomotives on the Baltimore and Ohio and other railroads, the coming of the year 1856 was to see his severance of relations with the B & O. That was the year in which Henry Tyson succeeded Samuel J. Hayes as master of machinery of the Baltimore and Ohio Railroad. Tyson did not agree with Winans on locomotive design, and this resulted in the famous controversy, a good description of which you can also find both in Snowden Bell's and Edward Hungerford's books. One is inclined to agree with Snowden Bell that neither of the parties to this controversy was entirely correct in the position taken by him or free from prejudice in his assertion of it. Ross Winans steadily maintained that a leading truck was not necessary on road freight engines while Tyson took the opposite view. Had these two men been able to meet on a common ground, it would probably have resulted in Winans developing a 2-8-0 locomotive as a compromise between the 0-8-0 "camels" and the Tyson 10-wheel engines. However the result was that Winans closed his plant in 1857. At that time, he had four locomotives on hand and unsold, three "camels" and the "Centipede," which, strangely enough, did have a 4-8-0 wheel base. During the Civil War, the Baltimore and Ohio repeatedly offered to buy these locomotives and Tyson himself approached Winans. Winans at that time told Tyson that he would not sell the locomotives to him for any amount of money. Thatcher Perkins succeeded Tyson in 1863 and Winans was willing then and did sell the four engines to the Baltimore and Ohio Railroad.

Two of Ross Winans' sons made quite a name for themselves in the railroad business. Probably the better-known of the two was Thomas DeKay Winans, eldest son of Ross, who was born in New Jersey on December 6, 1820. He was brought to Baltimore when ten years old and, after receiving his common education, was apprenticed as a machinist. He displayed such skill that, before he had attained his majority, he was entrusted with the headship of a department in his father's plant. When scarcely 18 years old, he was charged with the delivery of some locomotives to the Boston and Albany Railroad. While he was in New England on this mission, he met George W. Whistler who obviously was impressed by him and was no doubt the reason why he, Whistler, later invited Ross Winans to enter into negotiations with the Russian Government.

In 1843, Thomas and his brother William, with Joseph Harrison, a member of the firm of Eastwick and Harrison, journeyed to Russia and Thomas Winans, against the competition of all foreign bidders, secured

the contract to equip the Russian railroads in five years with locomotives and rolling stock. The two brothers were part of the firm of Harrison Winans and Eastwick, which established the shops at Alexandrovsky, near St. Petersburg, and completed the contract one year ahead of schedule. A new contract was immediately made for further building and maintenance of rolling stock.

Thomas married Celeste Revillon, a Russian of French and Italian descent, on August 23, 1847. In 1851, Thomas returned to America, leaving his brother William to fulfill the contract, which was completed by 1862. The firm was able to get a third contract in 1866, which was to run for two years, but before the expiration of that one, the St. Petersburg and Moscow Railroad decided to take over and operate their own shops, and paid the firm a handsome bonus for relinquishing the contract.

William L. Winans, second son of Ross, and member of the Russian firm, never did return to America but died later in England, after having amassed a fortune of some twenty odd millions. While in St. Petersburg, in addition to his railroad activities, he designed and built the Nicholifsky stone bridge across the River Neva, at St. Petersburg. It was the first permanent bridge erected there, former bridges being of the pontoon type only, which were removed in the winter on account of the ice floes. Winans bridge had cigar-shaped buttresses pointing up stream which were able to break the ice floes and keep the bridge from being torn from its foundation.

An interesting sidelight on the railroad plant at St. Petersburg is a portion of the original contract copy, from George Whistler's copy which is in possession of the Baltimore and Ohio Railroad. This portion, which has to do with working hours, reads as follows:

"On working days, beginning work at six o'clock in the morning; from half-past eight til nine, breakfast and rest; from nine to twelve, work; from twelve til half-past one, dinner; from half-past one to half-past seven in the evening, work; every Saturday the work finishes at seven o'clock; on the eve of other holidays and saints days, the work finishes as on common work days, that is, at half-past seven; on holidays and saints days, particularly marked in the almanac, they (the workmen) will not work.

"In addition to this, on the day preceding Christmas Day (the 24th of December) and the day preceding the holiday of the Transfiguration (the 4th of August), the workmen are to be free from work from midday."

It was Thomas Winans who owned the large and, to the people of southwest Baltimore, mysterious estate bounded by Baltimore Street, Fremont Avenue, Hollins Street and Calendar Alley. The original portion of the mansion was built in 1800 by M. Boisseau who conducted a very fashionable school there. In a few years the building passed into the hands of Thomas G. Thornton, who named it "Fayetteville." In 1848, Thomas Winans purchased the estate and named it "Alexandroffsky."

Thomas made many changes and alterations not only to the building but to the grounds themselves, introducing a quantity of classical statues which immediately shocked the good burghers of West Baltimore. So much was said about it at the time that Winans built a high brick wall completely around the place, topping it with broken glass embedded in concrete. This great wall was built just prior to the Civil War. There is another story regarding this wall which is told in Baltimore and that is to the effect that there was so much public indignation because he had two large lions on the terrace in front of the mansion which the local natives interpreted as being decidedly pro-British. There were a great number of Irish living in that neighborhood which would give some credence to the story. However, the wall was built and until the estate was sold and demolished in 1914, few people ever knew what was behind it. People of West Baltimore called it "Winans Wall" and some erroneously believed that it had belonged originally to Ross Winans.

Ross Winans had two other sons, named Walter Scott Winans and Dewitt Clinton Winans. He also had one daughter, Julia, who married George W. Whistler, Jr., son of George Whistler, whom we have previously mentioned, as well as half-brother of the famous artist, James McNeil Whistler.

In 1851 or '52, Ross Winans moved to the southeast corner of Parkin and Hollins Streets, opposite the large estate of his son. Prior to that he had lived at 255 W. Fayette Street. The records tell us that the Winans were very much interested in the welfare of the working classes, and that during the Civil War, Thomas Winans operated a soup station opposite his home where he fed 4,000 people daily. The Ross Winans' home during the early part of this century was used as a private school for boys but was to meet the same fate as Thomas's larger estate across the street as it was torn down to make way for Lithuanian Hall, which now stands on that site. Another of Ross Winans' philanthropical experiments was the building of 114 houses, each containing two apartments, which were rented to working men. These buildings were four stories high, having three rooms on the first and second and two rooms on the third and fourth floors; each house being designed for two families. These houses were east and west of Parkin Street from Pratt to Ramsey and on the east side of Bentley. Unfortunately, these houses were opened for occupancy in 1873, the first seven long, lean years of one of the country's worst depressions, and Winans had great difficulty in collecting rents. It is stated that he lost \$400,000 in this investment.

These houses soon became dilapidated and a very poor class inhabited them, many nothing more than squatters. It was long known as "Winans Row" and later as "good husbands row," the latter due to the fact that most of the men could not leave their wives long enough to go out and seek work. These houses were all torn down to make way for the expansion of the Bartlett Hayward plant, with the exception of one which is now standing and is used as an office building.

The Winans family obviously had to be always inventing or building something and when it was not locomotives, it was something else. Thus,

in 1858, we find Ross Winans and his sons experimenting with a cigar-shaped steamboat whose object was to advance the science of commerce by supplying vessels which would more fully answer the requirements than any previously constructed. In an advertising circular, Ross Winans stated that "the length of the vessel was more than 11 times its breadth of beam, being 16 ft. broad by 108 ft. long. This boat, which was launched in October 1858, was powered by four high-pressure engines. Apparently it had a peculiar type of drive because, instead of propellers or paddle wheels, around the huge cigar-shaped vessel, at midship, was passed an iron wheel with flanges at an angle adapted to work upon the water and give propulsion to the vessel.

On its trial trip, in January, 1859, the boat attained an average speed of about 12 miles per hour. Ross Winans, however, was not entirely satisfied with the results and in February, 1859, he lengthened the ship to 194 ft. and again in October, 1859, increased the length to 235 ft. While the ship was given extensive tests and later sent to England, it was never successful.

At the outbreak of the Civil War, it developed that Ross Winans was decidedly favorable to the Southern cause. Much has been said about the steam cannon which Winans was supposed to have invented, but according to Scharf's "Story of Maryland," published in 1879, the gun was invented by Charles S. Dickinson and built by Winans at his shop in Baltimore. It was asserted that this device would throw 200 balls a minute, a distance of two miles, and would be terribly destructive to an army, mowing down regiments like grass. It was protected by a bullet-proof cone of iron and could be made to project missiles of any size. Its efficiency was never tested as it was captured on its way to Richmond, at Harper's Ferry, and placed in position to guard the Thomas Viaduct of the B & O Railroad at Relay, Maryland. Undoubtedly, however, it was through the efforts of Ross Winans that the gun was built and started on its way to the South.

Ross Winans was a member of the Maryland Legislature which met in Frederick, Maryland, in 1861. On the return trip to Baltimore from one of these meetings, Winans was taken off of the B & O train at the Relay House by order of General Butler and charged with high treason. Although Governor Hicks, of Maryland, and a large number of delegates were on the train, they could do nothing to prevent Winans' arrest. He was taken to Annapolis and from there to Ft. McHenry, where he was imprisoned for a short time and then released without having been tried.

His friends, being very indignant at his arrest, nominated him the next day for Congress. However, the substitution of military for civil rule in Baltimore and the subsequent political changes which resulted, prevented any attempt to elect him. His name was subsequently withdrawn.

Winans was arrested again in September of 1861 but was released and nothing ever came of the matter.



Ross Winans was always interested in projects for improving Baltimore and published numerous pamphlets on problems of local hygiene and water supply. Then, having acquired the writing habit, he also wrote a number of unorthodox works on religious subjects, the most significant of which was, "One Religion, Many Creeds," published in 1870.

Ross Winans was married twice. First, on January 22, 1820, to Julia DeKay, of New Jersey, who died in 1850; then, in 1854, he was married to Elizabeth K. West, of Baltimore.

Ross Winans died on April 11, 1877, while in his 81st year, and a colorful character passed from the Baltimore scene. From the pictures which we have seen of him, with his bushy white hair and beard, he presented a striking appearance which was in keeping with his forceful character.

John H. B. Latrobe, a lawyer who handled much of Winans' legal business, in his autobiography states that:

"Mr. Winans was a man of more than ordinary mind, a bold and original thinker, with a good deal of imaginary faculty."

Angus Sinclair, in his book, "Development of the Locomotive Engine," has this to say:

"Winans led the world in advocating powerful locomotives and appeared to have clear conception of the economy that would result from the use of engines as large as the track would carry. It is only within the last decade that railroad managers have endorsed by practice the wisdom of Winans' policy. The light track which his engine had to run upon kept down the weight, but with all of the restrictions imposed by weak structures and prejudice against heavy loads, he built engines that compared fairly with those of modern construction."

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# A LIST OF LOCOMOTIVES BUILT BY ROSS WINANS AS FOUND IN THE ANNUAL REPORTS OF THE RAILROAD COMPANIES.

1837

Philadelphia & Columbia R. R. *Baltimore*

1838

Philadelphia & Reading R. R. *Delaware*

1840

Philadelphia & Columbia R. R. *W. F. Packer*

1841

Western (Mass.) R. R. <i>Maryland</i>	14 1/2 x 24" 44000 lbs.
Western (Mass.) R. R. <i>Michigan</i>	14 1/2 x 24" 44000 lbs.

1842

Western (Mass.) R. R. <i>Illinois</i>	14 1/2 x 24" 44000 lbs.
Western (Mass.) R. R. <i>Ohio</i>	14 1/2 x 24" 44000 lbs.

1843

Baltimore & Ohio R. R. *Atalanta* 14 x 20" 60"

1844

Baltimore & Ohio R. R. <i>Hercules</i>	17 x 24" 33" 23 1/2 tons
Baltimore & Ohio R. R. <i>Gladiator</i>	17 x 24" 33" 23 1/2 tons
Baltimore & Ohio R. R. <i>Buffalo</i>	17 x 24" 33" 23 1/2 tons
Baltimore & Ohio R. R. <i>Baltimore</i>	17 x 24" 33" 23 1/2 tons

1845

Baltimore & Ohio R. R. <i>Cumberland</i>	17 x 24" 33" 23 1/2 tons
Baltimore & Ohio R. R. <i>Elephant</i>	17 x 24" 33" 23 1/2 tons
Baltimore & Ohio R. R. <i>Reindeer</i>	17 x 24" 33" 23 1/2 tons

1846

Baltimore & Ohio R. R. <i>Opequan</i>	17 x 24" 33" 23 1/2 tons
Baltimore & Ohio R. R. <i>Elk</i>	17 x 24" 33" 23 1/2 tons
Baltimore & Ohio R. R. <i>Catoctin</i>	17 x 24" 33" 23 1/2 tons
Baltimore & Ohio R. R. <i>Youghiogheny</i>	17 x 24" 33" 23 1/2 tons
Baltimore & Ohio R. R. <i>Allegheny</i>	17 x 24" 33" 23 1/2 tons
Baltimore & Ohio R. R. <i>Tuscarora</i>	17 x 24" 33" 23 1/2 tons



## 1847

Philadelphia & Reading R. R. *Baltimore*  
 Philadelphia & Reading R. R. *Maryland*  
 Philadelphia & Reading R. R. *Delaware*  
 Philadelphia & Reading R. R. *Ohio*  
 South Carolina R. R. *Rough & Ready*

## 1848

Baltimore & Ohio R. R. *Camel* 19 x 22" 43"  
 Baltimore & Ohio R. R. *Juno* 14 x 20" 60"  
 Baltimore & Ohio R. R. *Iris* 19 x 22" 43"  
 Baltimore & Ohio R. R. *Mars* 19 x 22" 43"

## 1849

Northern Central R. R. *Major Whistler* 14 1/4 x 18" 60" 39100

## 1850

Baltimore & Ohio R. R. *Phoenix* 19 x 22" 43"  
 Baltimore & Ohio R. R. *Apollo* 19 x 22" 43"  
 Baltimore & Ohio R. R. *Savage* 19 x 22" 43"  
 Baltimore & Ohio R. R. *Pilot* 19 x 22" 43"  
 Northern Central R. R. *R. M. Magraw* 19 x 22" 42" 57300  
 Northern Central R. R. *Daniel Webster* 19 x 22" 42" 57300  
 Northern Central R. R. *John S. Gittings* 19 x 22" 42" 57300  
 Philadelphia & Reading R. R. *Patapsco*  
 Philadelphia & Reading R. R. *Minnesota*  
 Philadelphia & Reading R. R. *Georgia*  
 Philadelphia & Reading R. R. *Louisiana*

## 1851

New York & Erie R. R. Nos. 88—89, 19 x 22" 43" 56000  
 Baltimore & Ohio R. R. Nos. 70—71, 19 x 22" 43" 56000  
 Baltimore & Ohio R. R. Nos. 73—75, 19 x 22" 43" 56000  
 Baltimore & Ohio R. R. Nos. 77—82, 19 x 22" 43" 56000  
 Baltimore & Ohio R. R. Nos. 84—85, 19 x 22" 43" 56000  
 Northern Central R. R. *J. Edgar Thomson* 19 x 22" 41" 57300  
 Philadelphia & Reading R. R. *Iowa*  
 Philadelphia & Reading R. R. *Wisconsin*

## 1852

Cleveland & Pittsburgh R. R. *Carroll* 19 x 22" 42"  
 Cleveland & Pittsburgh R. R. *Jefferson* 19 x 22" 42"  
 Baltimore & Ohio R. R. Nos. 86—88, 19 x 22" 43"  
 Baltimore & Ohio R. R. Nos. 90—94, 19 x 22" 43"  
 Baltimore & Ohio R. R. Nos. 96—98, 19 x 22" 43"  
 Baltimore & Ohio R. R. Nos. 100—106, 19 x 22" 43"  
 Baltimore & Ohio R. R. Nos. 108—121, 19 x 22" 43"  
 Northern Central R. R. Nos. 5—6, 19 x 22" 42" 57300  
 Northern Central R. R. Nos. 8, 19 x 22" 42" 57300

Northern Central R. R. Nos. 10 — 11, 19 x 22" 42" 57300

Philadelphia & Reading R. R. *New Jersey*

Philadelphia & Reading R. R. *Mississippi*

Philadelphia & Reading R. R. *Connecticut*

Philadelphia & Reading R. R. *New Hampshire*

Philadelphia & Reading R. R. *Utah*

1853

Baltimore & Ohio R. R. Nos. 123 — 125, 19 x 22" 43"

Baltimore & Ohio R. R. Nos. 128, 19 x 22" 43"

Baltimore & Ohio R. R. Nos. 130, 19 x 22" 43"

Baltimore & Ohio R. R. Nos. 132 — 137, 19 x 22" 43"

Baltimore & Ohio R. R. Nos. 140 — 141, 19 x 22" 43"

Baltimore & Ohio R. R. Nos. 143 — 148, 19 x 22" 43"

Baltimore & Ohio R. R. Nos. 154 — 157, 19 x 22" 43"

Baltimore & Ohio R. R. Nos. 160 — 163, 19 x 22" 43"

Baltimore & Ohio R. R. Nos. 168 — 191, 19 x 22" 43"

Pennsylvania R. R. *Cyclops* No. 51

Pennsylvania R. R. *Pluto* No. 48

Pennsylvania R. R. *Vulcan* No. 50

Pennsylvania R. R. *Thor* No. 52

1854

Lackawanna & Western R. R. *Carbon* 15 x 20" 51" 70000

Baltimore & Ohio R. R. Nos. 192 — 197, 19 x 22" 43"

Pennsylvania R. R. *Mountaineer* No. 88

Pennsylvania R. R. *Logan* No. 91

Philadelphia & Reading R. R. *Chippeway*

Philadelphia & Reading R. R. *Monongahela*

Philadelphia & Reading R. R. *Tamaqua*

Philadelphia & Reading R. R. *Saranak*

Philadelphia & Reading R. R. *Susquehanna*

Philadelphia & Reading R. R. *Colorado*

Philadelphia & Reading R. R. *Narragansett*

Philadelphia & Reading R. R. *Penobscot*

Philadelphia & Reading R. R. *Kennebec*

Philadelphia & Reading R. R. *Nebraska*

Philadelphia & Reading R. R. *Santee*

Philadelphia & Reading R. R. *Shenandoah*

Philadelphia & Reading R. R. *Cumberland*

Philadelphia & Reading R. R. *Potomac*

Philadelphia & Reading R. R. *Savannah*

1855

Philadelphia & Reading R. R. *Yellow Springs*

Philadelphia & Reading R. R. *Arkansas*

Philadelphia & Reading R. R. *Rausch Gap*

Philadelphia & Reading R. R. *Pottsville*

Philadelphia & Reading R. R. *Rhode Island*  
 Philadelphia & Reading R. R. *Harrisburg*  
 Philadelphia & Reading R. R. *Germantown*  
 Philadelphia & Reading R. R. *Lexington*  
 Philadelphia & Reading R. R. *San Francisco*  
 Philadelphia & Reading R. R. *Ashland*  
 Philadelphia & Reading R. R. *Mt. Vernon*  
 Philadelphia & Reading R. R. *Buffalo*  
 Philadelphia & Reading R. R. *Richmond*  
 Philadelphia & Reading R. R. *Panama*  
 Philadelphia & Reading R. R. *Washington*  
 Philadelphia & Reading R. R. *Charlestown*  
 Philadelphia & Reading R. R. *Albany*  
 Delaware, Lackawanna & Western R. R. *Maryland*  
 Delaware, Lackawanna & Western R. R. *Virginia*  
 Delaware, Lackawanna & Western R. R. *Vermont*  
 Delaware, Lackawanna & Western R. R. *Michigan*  
 Delaware, Lackawanna & Western R. R. *Connecticut*  
 Northern Central R. R., Nos. 27—32, 19 x 22" 42" 60000  
 Pennsylvania R. R. *Corn Planter* No. 119  
 Pennsylvania R. R. *Mohawk* No. 140  
 Pennsylvania R. R. *Oneida* No. 124  
 Pennsylvania R. R. *Red Jacket* No. 121  
 Pennsylvania R. R. *Seneca* No. 131

1857

Pittsburgh & Connellsville R. R. No. 3  
 Baltimore & Ohio R. R. Nos. 210—219, 19 x 22" 43"

1858

Northern Central R. R. Nos. 39—42, 19 x 22" 42" 60000

1863

Baltimore & Ohio R. R. No. 199, 19 x 22" 43"  
 Baltimore & Ohio R. R. No. 188, 19 x 22" 43"  
 Baltimore & Ohio R. R. No. 235, 19 x 22" 43"  
 Baltimore & Ohio R. R. No. 204, 19 x 22" 43"

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It must be remembered the above list is far from complete. It is simply a roster of the Winans locomotives found in the annual reports of the above companies but the list will serve as a guide as to where some of the Winans engines were delivered.

# Hoosier Heritage — The Monon

*Paper read before the Chicago Chapter of the R. & L. H. S. Oct. 11, 1946.*

By V. A. HEWITT

It is a tribute to the fascination of the railroad industry that your membership, many of whom are not identified with it by occupation, nevertheless have banded themselves together into the Railway and Locomotive Historical Society for the purpose of seeking and exchanging information on this intriguing subject. It is my happy privilege to have been invited to contribute for your Society a brief chapter to the lore of American Railroads.

The choice of the railroad selected for consideration tonight, the Monon, is most timely, since it comes on the eve of that road's Centennial celebration. Next July it will have been in existence one hundred years. I am particularly grateful for the opportunity to tell you something of the story of this railroad, because it is so essentially an Indiana institution, and I am a native Hoosier. Virtually all of my business life has been spent in its service. In certain respects its career and mine have been somewhat parallel. It has gone through good times and bad, as I have done. On various occasions it has been in financial difficulties, as I have been. Just now we both have a few dollars in the bank, and with true Hoosier optimism, we are looking forward to better times ahead.

The corporate name of the road was originally (in 1847) the New Albany & Salem Railroad Company. Later it was changed to Louisville, New Albany and Chicago, and still later to the present name, Chicago, Indianapolis and Louisville Railway Company. Unlike some railroads, it actually reaches the towns and cities included in its name. Most commonly it was known by the shorter and more convenient term "The Monon". Much diligent search has been made to learn exactly the source and meaning of the word "Monon". The research has been interesting, but not exactly conclusive. A number of years ago a student at the University of Chicago wrote to former President Kurrie inquiring about it. He said that in his study of the Greek language he had discovered the word "Monon", and its meaning in Greek was "the only" or "the only one". No evidence has been adduced to prove the name was applied to the railroad because of those implications. Mr. Kurrie replied to the inquiring student that, while he was unable to verify the young man's theory, there could be no possible objection to having the Monon regarded in the light of the Greek significance of the word, "the only one". Recently a friend wrote to Mr. J. W. Barriger, now President of the Monon, stating that certain information had come to his knowledge concerning the origin of the word. I quote a portion of his letter to Mr. Barriger:

*"The village of Monon (Indiana) was incorporated in 1879, under the name which in 1848 was given to a post office. The early post office and township were named for Big and Little Monon Creeks.*

*"Monon is a Potawatomi word equivalent to Tote or Carry. The spelling of the creek name was originally Monong. Big Monon Creek was called Metamonong, Meta meaning Big.*

*"Whether Potawatomi or not, there is activity in a word which, translated into our expansive language means 'to carry', especially when it is applied to transportation."*

Professor Frank F. Hargrave, of Purdue University, lends support to this theory in a footnote found in his estimable history of the Monon, reading as follows:

*"The meaning of the word Monon is somewhat doubtful. It has been declared by some to be a Potawatamy Indian name meaning 'to carry'. There is also a tradition that the term means 'swiftly moving.'"*

Probably the theory best known among Hoosiers as to the origin of the name is found in a paragraph written by the late George Ade, famous Indiana humorist. His brief essay on the Monon has been reproduced in the road's dining car menu folders for many years. Its lyric quality justifies its quotation in full, as follows:

*"The traveler who wishes to see Indiana must go riding on the Monon. It was the first iron trail to be pushed from one end of the state to the other. That is why so many worth-while things may be seen from the car window.*

*"The Monon pathway is by open prairies and deep woodland, across the Kankakee and Tippecanoe and Wabash, up to the gates of important cities, and through the quiet shades of college towns. It links the Ohio with the Grand Calumet and lays a friendly hand on factories, fields and quarries through an important chain of counties.*

*"The name 'Monon' is Indian. It means 'swift-running'. The railway began to make history some ninety years ago. My first dream, as a Hoosier boy, was to ride away on the Monon toward the Heaven-piercing spires of Lafayette or Michigan City. The Monon is 'catty-cornered' to the whole State of Indiana, and all its trains are 'Hoosiers'."*

You may take your choice of these theories — or if you have a still different one, we should be glad to know about it.

## *History of the Road*

For the origin and development of the Monon Railroad, I have drawn freely from Professor Hargrave's book "A Pioneer Indiana Railroad", to which I have already briefly referred, not only for convenience, but because it is, probably one of the most historically accurate of all the books that have been written on early railroad development. This book was published in 1932, and Professor Hargrave, incidentally, has been asked to revise and bring it down to date and have it reprinted as a feature of the Monon's Centennial Celebration next year. We shall touch only the surface tonight, but for a complete and authentic history of the road, I commend to you Professor Hargrave's painstaking and scholarly work.

During the decade from 1840 to 1850 the time was ripe and the need had been established for the rails to connect the Great Lakes with the Ohio River. Covered wagons, ox carts, prairie schooners and river boats had done their share to populate the country, but the increase in population and the development of industry and agriculture created a demand for improved market facilities. A few years earlier the State of Indiana had embarked on a rather elaborate plan for internal improvements, a phase of which was the construction of an extensive system of macadamized roads, railroads and canals. The State's ambitions exceeded its abilities. The plan broke down, leaving the State greatly in debt. Not being able to complete the project itself, the State parcelled out to private corporations, to the extent that it could, the right to pursue individual phases of its development plan. One such phase, the one with which we shall concern ourselves now, related to the building of a macadam road between New Albany and Crawfordsville. The State had already begun this project, and some grading and other work had been done before the enterprise was abandoned, and offered to private interests. Citizens of New Albany and Salem, Indiana, desiring improved market facilities between the two towns, organized the New Albany and Salem Railroad Company in 1847, sold stock to finance the venture, and on July 8, 1847, designated the road's corporate name, and elected a Board of Directors. On the same date James Brooks was elected the first President. Mr. Brooks was born in the State of Maine, of English ancestry, and came to the middle west with his parents at the age of 4. Much enacting, repealing, and more enacting of laws by the Indiana General Assembly appear to have been required before all of the legal formalities were adjusted to the new enterprise. Moreover, since the people most interested in the project were not wealthy, subscriptions of stock had to be secured from a great many people of moderate means. Only a part payment was required to be made for the stock at the time of subscription, the remainder to be paid later, and this led to ill feeling between the officials of the road and the stockholders, when the payments were not readily forthcoming. Probably that was not greatly different from the way in which similar transactions result today. Municipalities along the route also subscribed for stock. The estimate made by the Pres-



ident, of the cost of building and equipping the line as far north as Salem (35 miles) was \$235,000 for the road complete, ready for the cars, laid with a flat bar  $\frac{7}{8}$  by  $2\frac{1}{2}$  inches, together with buildings, water stations, and so forth. Locomotives, cars, etc., required for the first year's business were estimated to cost \$65,000, making the total cost \$300,000.

The towns of Salem and New Albany originally subscribed for stock in the new company, and as plans were developed to push the line further northward, the people of the towns affected came into the picture — Orleans, Bedford, Bloomington and others, as far north as Crawfordsville.

Comparatively little information is available concerning the actual construction of the first segment of the line. The organization of the road having been completed in July, 1848, the employment of a chief engineer was authorized in August, at a salary of \$1,500 a year. A Mr. L. B. Wilson served in that capacity for several years. A tentative survey was made by the close of the year, and a corp of engineers was employed to find a permanent location and prepare the work for contracting. A contract for initial construction was signed March 28, 1848. First ground was broken on May 3, 1848, beginning at New Albany and proceeding northward. Details of construction are lacking. Certain it is that there was no machinery such as is in use today. Grading was done by hand. Cuts and fills were made by men with wheelbarrows and shovels. Portions of Southern Indiana are quite hilly, and Professor Hargrave records something of the difficulties experienced in building through the line of hills known as "The Knobs", some 22 miles north of New Albany. Here it was necessary to make a cut 34 feet deep, 22 feet of which was through solid rock. This is still one of the road's most vexatious grades.

There were also many curves, the result of efforts to avoid the hills and ease the grades. Many of these curves still exist, and the story goes that trainmen, while flagging from the pilot of an engine, habitually leaned far to the outside when going around a curve, in order to obtain maximum vision around the curve ahead, and to this day you can tell a Southern Division brakeman whenever you see him because he always leans to one side while walking. By July 4, 1849, some three miles of track had been laid northward from New Albany, and on that date an excursion train was run, apparently the first train operation on the road. A newspaper item of June 6, 1850, mentions an excursion over ten miles of road. By July 4, 1850, twenty-two miles had been completed, and trains were run in either direction every three hours throughout the day to carry passengers to and from a grand barbecue which was held where the tracks ended on the North. On January 14, 1851, the road had been completed the entire distance of 35 miles to Salem, thus fulfilling the original intention of connecting Salem with the Ohio River.

In a sense, therefore, the town of Salem may be regarded as having at one time, for a brief period, been the northern terminus of the road, and so, to have a place in history. The story is told that on a certain occasion when a freight train was going down the hill approaching Salem, the fireman felt that the engineer was running a little too fast. Thinking

to caution him, he leaned across the cab, pointed forward and shouted: "Salem down there." There was no response from the engineer, other than to pull the throttle open just a little wider, increasing the speed slightly. After a few seconds the fireman became slightly alarmed and again shouted: "Salem down there." Again the only response from the other side of the cab was a slightly increased pressure on the throttle. A third time the fireman shouted: "Salem down there." Apparently a little bit nettled, the engineer shouted back: "What the hell do you think I'm doing? I'm sailin' 'em as fast as they'll roll."

It is of interest to note that in this primitive construction no ballast was used, and a frame work of wood was required before rails could be put in place. Ties were laid on the grade four feet apart. Notches were cut in the ends of the ties, and wooden stringers were laid on the ties, at right angles to them. The rails, which were simply flat iron bars, weighing about 22 pounds per yard, were then laid on the stringers and fastened down with spikes driven through the center of the rail about 18 inches apart. This flat rail, however, appears to have been of short life, since by about 1856 the 45 miles originally laid with it had been relaid with T-rail, and subsequent new construction was all with T-rail. All of this T-rail, too, was imported, part of it from Liverpool and some from Cardiff, Wales; and it is an interesting commentary that it was transported almost entirely by water to the place where it was to be used, the water lines thus contributing to the construction of a competing form of transportation which was to greatly overshadow them in importance.

Although the construction between New Albany and Salem was an independent project, yet during its progress, determination was made to push the road further northward. An amendment of its charter was obtained, which was unique in that it permitted the extension of the road anywhere in the State that might be chosen. That was important later on. More stock subscriptions were obtained, and during 1849 contracts were let for construction of 30 additional miles northward from Salem and to a point within 4 miles of Bedford. The portion of the road from Salem to Orleans was completed and the first train ran over it on January 1, 1852. This was 57 miles from the Ohio River. Bedford was reached on April 18, 1853, a total distance of 71 miles. North of that point work had been proceeding under other contracts, and Bloomington was reached in the fall of 1853, the first train being operated to that point on October 11th. By January, 113 miles of road from New Albany to Gosport had been completed and were in operation.

To follow the development of the Monon chronologically, it is necessary, for the moment, to skip over a section some 57 miles in length from Gosport northward to Crawfordsville. We shall return to that section of the line later, but the next track, in order of time of construction, was to begin at Crawfordsville and extend 27 miles northward to La-Fayette. The same marketing problems which motivated the people of Salem in starting the New Albany & Salem Railroad confronted the people of Crawfordsville and provided the initial impetus for the construction of the Crawfordsville and Wabash Railroad. A group of Crawfordsville and Montgomery County citizens sought and obtained



a charter in 1844, but nothing came of it. Another was obtained two years later, in 1846. As in the case of the New Albany & Salem, money was raised through the sale of stock. The principal objective of the proposed new, railroad was to provide a means of transportation from Crawfordsville to connect with an established waterway, the natural choice of which was the Wabash and Erie canal. Under the charter the road could be constructed to join the canal at either LeFayette or Covington. LaFayette was chosen as the point of connection; hence it was decided to build the road between Crawfordsville and LaFayette. For convenience construction began at LaFayette and proceeded southward, since the rail had to be imported and, after crossing the Atlantic, was sent by boat from New York City up the Hudson River to Albany, thence through the Erie Canal to Buffalo, then to Toledo, and finally by the Wabash and Erie Canal to LaFayette. Surveys appear to have been made in 1847, contracts for grading were let in 1849, and grading had been completed by November, 1850. The placing of the superstructure then followed, and the first rail was laid in June, 1851. The rail had all been laid by June 1, 1852. Considerable rivalry existed between the citizens of LaFayette and Crawfordsville, and since Crawfordsville people were in control of the project, they exasperated the LaFayette people considerably by building the depot at the north end of the line a mile south of LaFayette, away from the business district, and connection was made there with the canal and the Wabash River. Business men of LaFayette countered by building a plank road from LaFayette almost to Crawfordsville, which was a considerable improvement over the mud roads and was designed to attract the trade of the farmers. Eventually in 1852 the New Albany & Salem acquired control of the Crawfordville and Wabash Company, extended the road into the town of LaFayette and built a new depot, which was reached by the first train on March 11, 1853. Even before completion of the road, negotiations were under way to make it a part of the New Albany & Salem, and this was consummated on June 17, 1852, only 17 days after the road was completed, and the Crawfordsville and Wabash Company passed out of existence.

The next segment of line to be constructed was that between LaFayette and Michigan City, a distance of 91 miles. This, too, was undertaken by the New Albany & Salem Company. Raising money for this project presented different problems than theretofore encountered. Practically no towns of any size existed along the proposed route, and the territory was so thinly populated that financing through the sale of stock was impracticable. Peculiarly and providentially, the problems of another railroad company provided a solution to the financing of the line between LaFayette and Michigan City. The Michigan Central Railroad had an ambition to build across northern Indiana into Chicago, but they were refused a charter by the State of Indiana. Eventually an arrangement was made whereby the Michigan Central accomplished its purpose by using the charter of the New Albany & Salem, which, it will be remembered, was a "roving" charter, enabling the New Albany & Salem Company to build anywhere in the State. The details of this

transaction with the Michigan Central, and of that company's bitter controversy with its competitor, the Michigan Southern, are items of history upon which time does not afford us opportunity to dwell now, but Professor Hargrave relates the story in interesting and fascinating detail. In return for the right to build under the charter of the New Albany & Salem, the Michigan Central agreed to purchase stock in the NA&S Company to the extent of \$500,000, of which \$400,000 was used on the line north of LaFayette, with \$100,000 left over to be used on the line south of Crawfordsville. First surveys were begun in April, 1851. The route was remarkably straight, the President reporting that the whole distance of 91 miles was less than half-mile longer than an air line. We understand that in this territory today there is the fourth longest stretch of tangent track to be found in the United States. The first contract was let in August, 1851. After the grading had been done, the work of laying rail southward from Michigan City was begun on July, 1852. By December 30 miles had been completed. Winter weather caused some slowing down, but by April 1853, 53 miles had been laid. Some construction had meanwhile been done northward, from LaFayette, and the gap was closed about October 3, 1853, making a continuous line from Michigan City to Crawfordsville.

We have now dealt with the entire line from New Albany to Michigan City, except a gap of some 57 miles from Gosport northward to Crawfordsville. Contracts for this work were let in 1852, and work proceeded simultaneously northward from Gosport and southward from Crawfordsville. We need not dwell on details of this project, since they seem to have followed in general the pattern of the earlier construction. The important thing is that the gap was closed and the last spike driven at 4:00 PM, on June 24, 1854. The first train to operate the entire distance from Michigan City to New Albany was run on July 3, 1854, making the trip in slightly over 16 hours.

Many interesting stories have been told about this trip, and others of that early period. One of them related to an engineer who had a very heavy beard. While somewhere in the vicinity of Crawfordsville, a gust of wind came into the cab and blew the engineer's whiskers up over his face. He applied the brakes with such alacrity that a considerable jolt resulted. Presently he released them, and the train began to pick up speed again. The fireman called over to the engineer: "Uncle John, why did you set the brakes back there?" The engineer called back: "Didn't you see that hay stack we ran into?"

The completion of the line from Michigan City to New Albany was an historic event, since the Ohio River and Lake Michigan were at last united by an important artery of commerce. The task had been completed in about 7 years. Although many great events have occurred in the State, probably this achievement may be regarded as the greatest engineering accomplishment of the people of Indiana, in view of the difficult conditions existing at that time.

For the first two or three years after beginning operation the road made a small profit. Drought conditions, the panic of 1857, and other

difficulties resulted default in payment of bond interest, and a trustee was appointed on October 1, 1858. Since the length of the road had surpassed the original intent of building it between New Albany and Salem, it was considered that the original name was no longer appropriate, and by a special act of legislature passed October 24, 1859, the name was changed to Louisville, New Albany and Chicago Railroad Company.

The road managed to continue operations under difficult financial conditions. The Civil War came along, and greatly increased earnings from the transportation of troops and war materials produced a period of relative prosperity, though equipment was pitifully inadequate to take care of all requirements. The road appears to have played its full part, and an important one, in the conduct of the war. One notable event was the movement of a special funeral train, bearing the body of the martyred President, Abraham Lincoln, over the line from LaFayette to Michigan City on May 1, 1865, whence it was handled by the Michigan Central to Chicago.

Renewed financial difficulties followed the close of the war. On April 8, 1869, the road was sold to trustees representing the claims of the first mortgage holders. The sale was set aside on legal technicalities the following year, but subsequently the mortgages were foreclosed and the road was again sold on December 27, 1872. The trustees organized a new company known as the Louisville, New Albany and Chicago Railway Company, which was chartered on January 7, 1873.

For the next few years the road apparently was able to operate on a solvent basis. In 1881 it effected a consolidation with the Chicago and Indianapolis Air Line, which is that portion of the present system extending from Hammond to Indianapolis. That line had been in process of construction since 1872, part of it narrow gauge, and it was not completed until 1884, when a connection was built with the Western Indiana Railroad near Hammond. That connection completed the job of uniting Chicago with Indianapolis and Louisville, and finished the construction of the line as it now exists.

But the new system was not born without travail. The purchase of the line between Hammond and Indianapolis, together with another period of unfavorable economic conditions, brought a renewal of financial troubles, the road defaulted in its obligations, and a receiver was appointed on August 24, 1896. Foreclosure proceedings again resulted, and again the road was sold, on March 10, 1897. Reorganization ensued, and the road was incorporated on March 31, 1897, under the present name, Chicago, Indianapolis and Louisville Railway Company. Within a few years thereafter, control by stock ownership was acquired by Southern Railway and Louisville & Nashville, whose financial interest in the company was, by mutual agreement, exactly equal. At no time did either line acquire more or less of the stock of the Monon than did the other. Aided by the traffic support of these two strong lines, the Monon enjoyed a relatively long period of prosperity. For upwards of 40 years it proudly carried on its functions of serving its Hoosier patrons. During

that period many things worth while could be related, but time does not permit us to dwell upon them tonight. One of the most noteworthy events, and one which demonstrates the affectionate and jealous attitude of the Hoosier family for their railroad was their spontaneous and virile up-rising against the proposal that the road be absorbed by the Baltimore and Ohio Railroad in the 20's. The people of Indiana joined other interests in vigorously opposing the plan, and, as you all know, it was not carried out.

A brief message appears near the end of Professor Hargrave's book which, in the light of subsequent developments, appears now to hold a tinge of irony and even tragedy. I should like to read to you, and ask you to bear in mind that it was written in 1932, when the great depression was upon us but obviously before its full impact had been realized. Here it is:

*"In respect to the prosperity of the road in recent years, it can be said that it has systematically paid dividends on all outstanding stock, both preferred and common, and under its present prosperity bids fair to continue to do so."*

There came the crash of 1929. Traffic dropped sharply, and the road failed to pay dividends. Then it failed even to pay interest on its outstanding bonds. The inevitable happened. The road became so ill financially that it was necessary to hurry into the bankruptcy hospital and surround it with a legal oxygen tent. Doctors called Trustees were placed in charge of the patient. Their most potent tool was the expense-cutting knife. The operation was successful, but the patient darn near died. The illness lasted for twelve and one-half years. At 12:01 A. M. on May 1st of 1946 the road emerged from bankruptcy, with a new lease on life. Under able leadership of its new President, Mr. Barriger, administering policies formulated by a distinguished roster of Directors, all of us who have the good fortune to be associated with the road confidently look forward to the complete fulfillment of the aims and ambitions which Mr. Barriger has created for it. A new vigor and enthusiasm and a sense of "going somewhere" have been breathed into the consciousness of every officer and employee, and to the last man there is a fixed determination to build on the ruins of the past a bright and glorious future.

Many things remain to be said which cannot be said here tonight, for the lack of time. Mention should be made of the construction in the late 80's of the Orleans, Paoli and Jasper Railway, later the Orleans, West Baden and French Lick Springs Railway, the 18-miles of branch line over which you may now ride to drink Pluto water or play golf at French Lick, or marvel at the beauty of the dogwood in the spring and the riot of color in the fall. For sheer grandeur, Southern Indiana ranks with the finest of Nature's beauty spots. Mention should also be made of the Indianapolis and Louisville Railroad, a branch line constructed in the early part of the present century, extending from the main line at a point a few miles south of Greencastle, a distance of some 47 miles into the prolific coal fields of southwestern Indiana.

Among the illustrious names associated with the road's history, there should be mentioned the fact that James Roosevelt, father of the late President of the United States, was President of the Monon for a little more than a year in 1884-1885. Likewise, an uncle of the President, Frederic A. Delano, was President of the Monon from December, 1913, to August, 1914, immediately preceeding H. R. Kurrie, who retained the position 24 years and 4 months until his death on Christmas Day of 1938, to establish a record for the longest service of all the road's chief executives, of whom there have been about twenty.

The universal use of the automobile over splendid highways are marks of inevitable human progress, and that has undeniably taken away permanently much passenger traffic from the rails. We may never again see the time when several 15-car sections of passenger trains will be standing in the Dearborn Station waiting to depart for the Kentucky Derby or French Lick Springs, with their one time colorful array of famous people — movie folk, statemen, politicians and plain good-time Charlies. We may never again see similar sections of trains ready to depart for the Speedway Races at Indianapolis. Many other of the former associations of the road have gone the way of the strap rail and the link and pin. But in their places will come, and to some extent there has already come, other evidences of progress — overnight freight service between any two points on the system, faster schedules to compete with the nation's best, heavier rail, easier curves and grades — and, as soon as they can be obtained, fast, comfortable and attractive Streamlined trains will be speeding through the Hoosier countryside.

There is so much more that might be said, but so little time to say it, and there must be a stopping point — perhaps a rather abrupt one. Though the story is not complete, I hope I have told you a few things of interest about the Monon. It has been a privilege and a pleasure to do so, and I hope that those things will stimulate your interest and curiosity to know more about it. In that event, let me assure you that the door is open and the latch-string is out to any of you who may pay us the compliment of a visit.

And now for our commercial: We should enjoy the privilege of having any of you as guests whenever you have occasion to go riding to Indianapolis, Louisville, or intermediate points; and that car of freight which you may entrust to our care will be treated as a member of the family. In any other manner that may present itself, it will be a pleasure to serve you, and thus carry on the best traditions of the Monon Railroad — the heritage of hardy pioneers to the people of Indiana and of the nation.

# The Canada Southern Railway

By DONALD R. MACBAIN

The Canada Southern came into being to furnish another outlet for the eastern traffic of the Michigan Central R. R. At Detroit, this road had no alternative than to turn this business over to the Great Western (Canada) Ry., a road that was originally of broad gauge, to which a third rail was subsequently laid in 1867 and finally, the road was made standard gauge in June, 1873. But even this did not deter a group of men to build a road across lower Ontario.

On February 28th, 1868, the Erie & Niagara Extension Ry. was incorporated to build a line from Fort Erie, via St. Thomas to Sandwich or Windsor. The year following the name was changed to Canada Southern. Southern Ontario presents no great difficulties in rail construction and it was determined to make the line as free from curvature as possible, no matter whether a village or town was omitted. In this the promoters showed wisdom and they succeeded — they were after the through traffic.

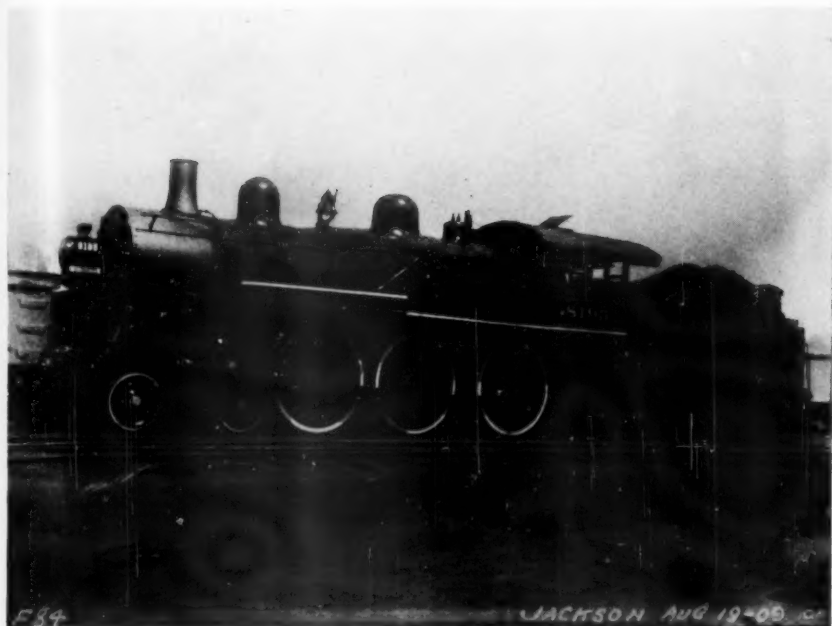
In 1872, this same group of men applied and received a charter from the Michigan Legislature giving them authority to build a railroad from West Detroit to Canada Southern Jct. in Toledo, with a branch line from Slocum Jct. across Grosse Isle to Stoney Island, under the name of the Toledo, Canada Southern & Detroit Ry. The two roads were to be united by a bridge across the Detroit River and a bridge company under that name was incorporated in 1872 to connect Amherstburg with Grosse Isle.

The promoters again went to the State of Michigan and, under the charter of the Canada, Michigan & Chicago R. R., were authorized to build a railroad from St. Clair to Lansing where a connection was to be made with the Peninsular R. R., thus forming a through route to Chicago. The line from Richmond to St. Clair was immediately built but the failure of the Michigan Air Line with its receivership put an end to the through route to Chicago. It was not until Dec. 4, 1874, that this road under its new name — The Michigan Midland & Canada R. R. was acquired by the Canada Southern.

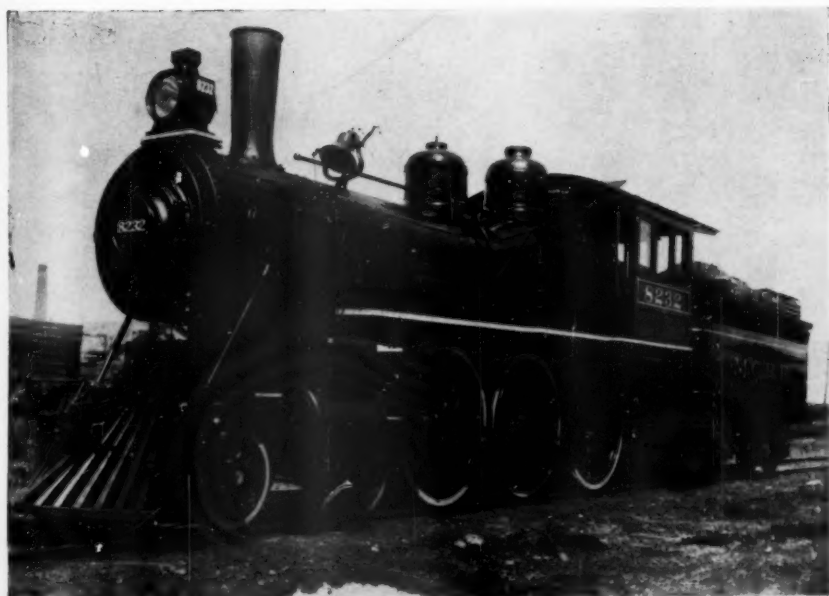
September 1st, 1873 saw the Toledo, Canada Southern & Detroit R. R., about 55 miles in length, completed between West Detroit and Canada Southern Jct. and the line from Slocum Jct. to Stoney Island. November 15th of this same year saw the Canada Southern completed from Fort Erie to Amherstburg and from St. Clair Jct. to Courtwright — a total distance of 291 miles.

The road was no sooner opened than it encountered financial troubles and was placed in receivership. The bridge across the Detroit River was never built, a tunnel was attempted, the charter of the bridge





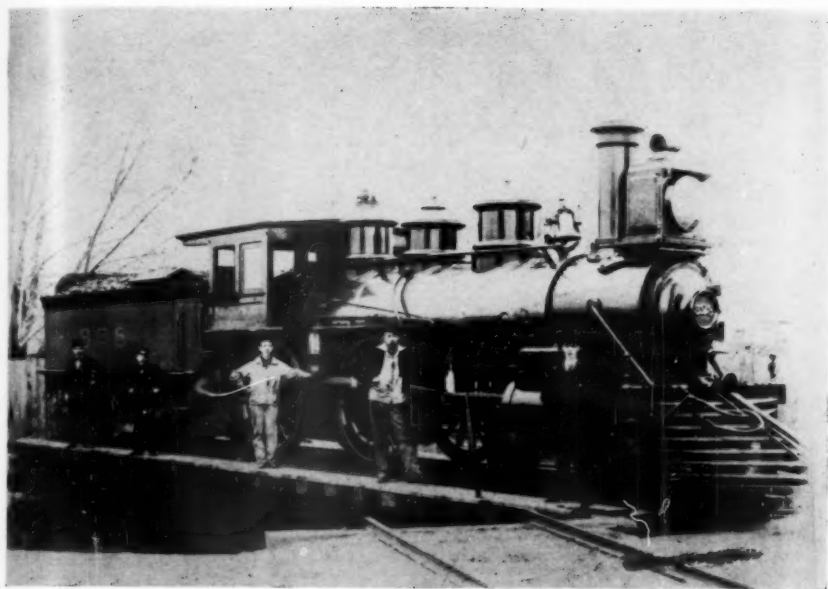
*Courtesy — H. R. Benson*  
M. C. (C. S. Div.) No. 8195. Schenectady, 1901.



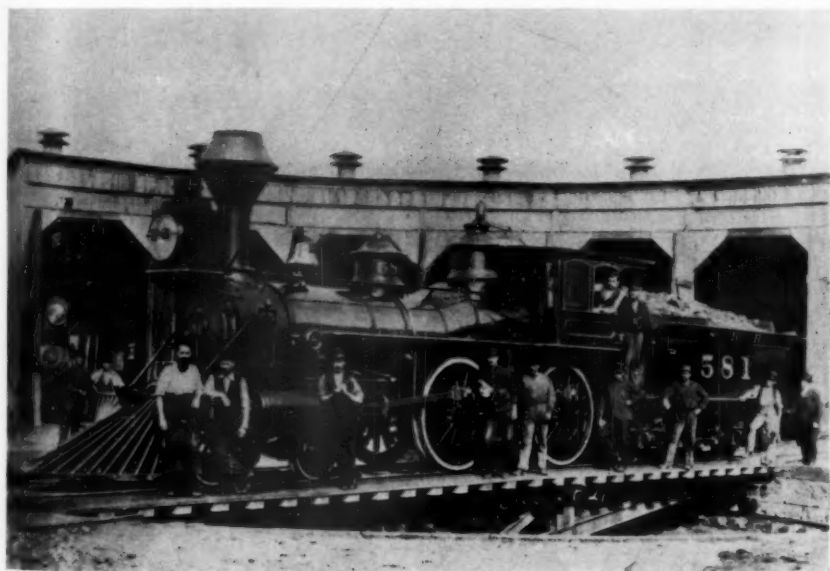
*Courtesy — H. R. Benson*  
M. C. No. 8232, Schenectady, 1893.







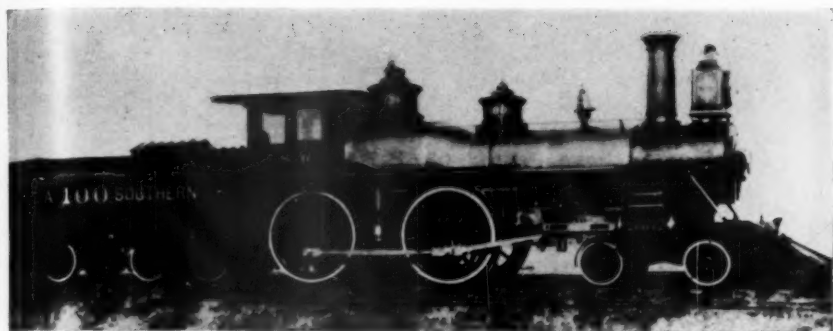
M. C. No. 328, ex—C. S. No. 3. Baldwin, 1872.



C. S. No. 581 Schenectady, 1879.

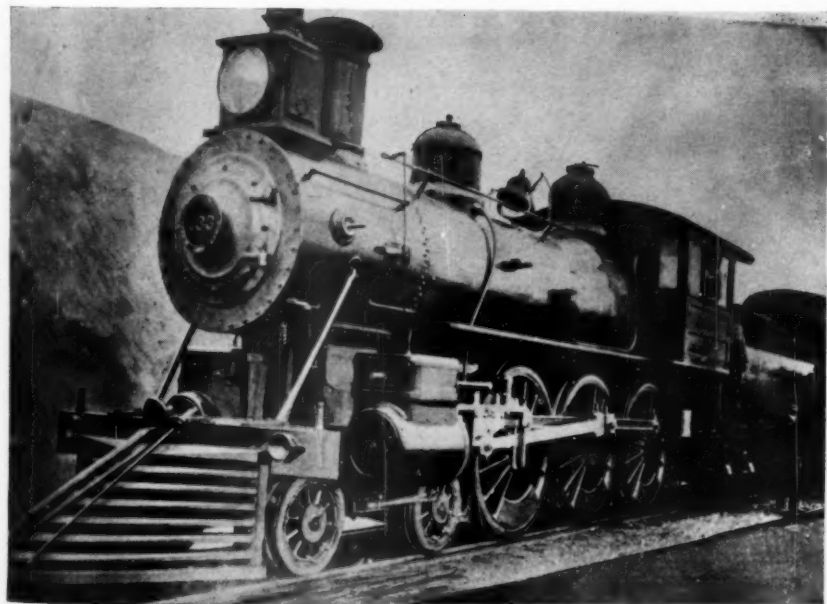
*Courtesy — C. E. Fisher*





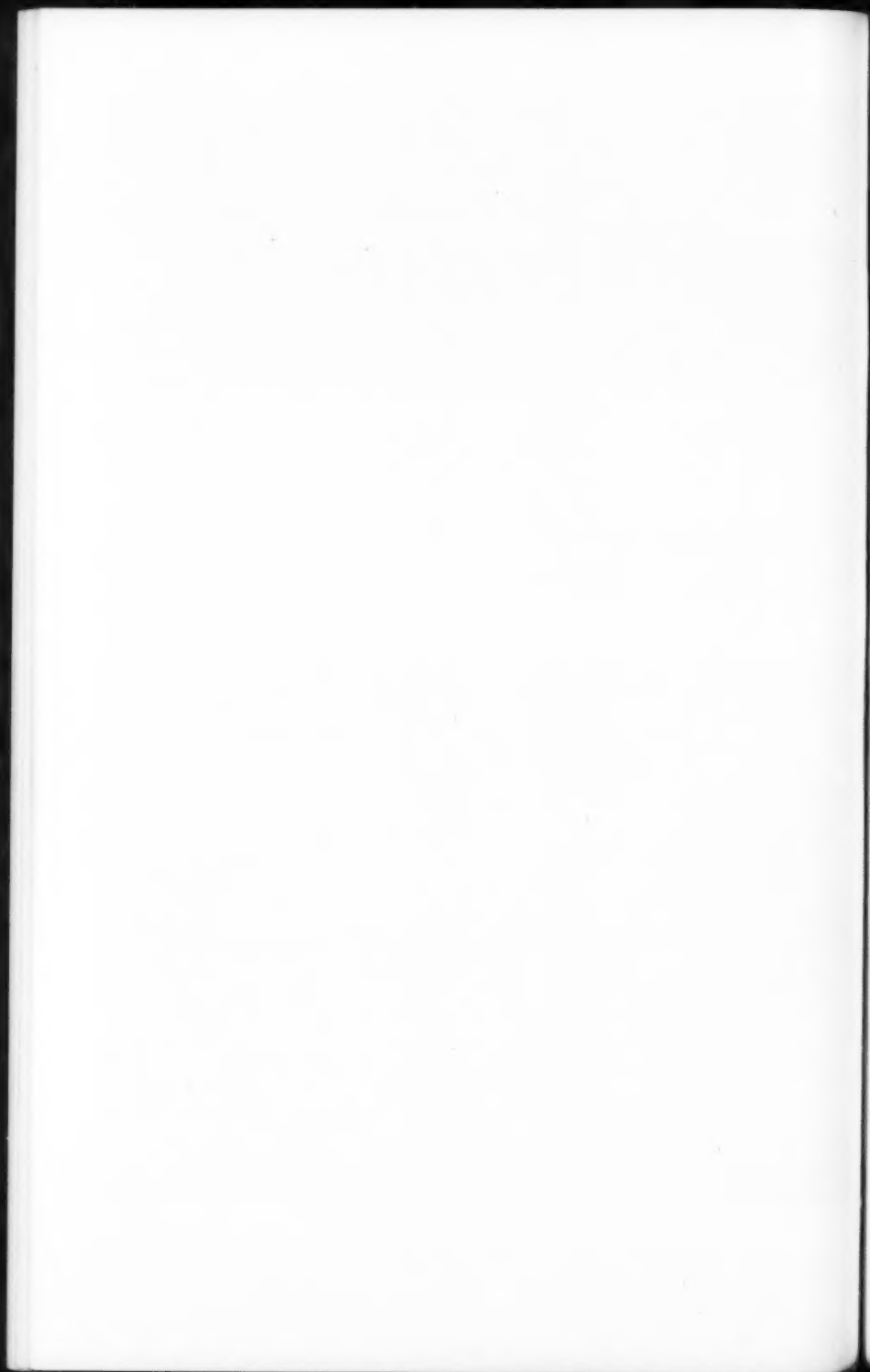
C. S. No. 100 Schenectady, 1882.

*Courtesy — C. E. Fisher*



MICHIGAN CENTRAL (C. S. Div.) 433, Schenectady, 1899.

*Courtesy R. C. Schmid*



company being amended for that purpose, but, even that failed. It was not until 1910 that the present tunnel was opened.

The Michigan Central management was none too well pleased with the invasion of this road into its domain in Michigan and both roads came under the watchful eye of Commodore Vanderbilt who was extending his empire westward. After the re-organization in 1878, we find the New York Central & Hudson River R. R. guaranteeing the interest on the bonds of the Canada Southern. Windsor, opposite Detroit was made the western terminus of the road, direct connection to be made with a ferry. For 21 years, according to the agreement, the Michigan Central was to operate the road, in connection with its own, the gross earnings of the whole system to be applied to operating expenses and fixed charges, the surplus to be divided two-thirds to the M. C. and one-third to the C. S. This agreement, effective Jan. 1, 1883 was replaced by a lease of this property by the Michigan Central in 1904 and on August 21, 1929, the Michigan Central leased the Canada Southern Railway to the New York Central R. R. for 99 years. But this route, passing Niagara Falls and with its long tangents, was always a popular route between New York and Chicago.

In my capacity as Locomotive Engineer, Travelling Engineer, Master Mechanic and Ass't. Sup't. of Motive Power, I knew most of the locomotives of the Canada Southern fairly well. The first group of engines came from the Baldwin Works as illustrated by the No. 328, the only change in her being the extension front end and the straight stack. John McDermot, the Engineer (with the oil can), was the first man I ever fired for. He was a grand character and, in 1901, when the late King George V visited Canada as the Duke of York, John, in full Knights Templar regalia was the engineer that handled the special train to Niagara-On-The-Lake where a stop was made for the night.

In September of 1877, the Bishop of the Catholic Diocese of Detroit, I think his name was Borgess, returned from Rome. The men of the diocese planned a fine reception and banquet for him upon his return. His train was due in Detroit two hours before the banquet was to take place, but the ship, delayed by a storm, delayed his arrival. Knowing that the Bishop would not arrive in time if he continued on the regular train, arrangements were made to detach his car at St. Thomas and run it as a special train to Windsor. The No. 13, in charge of Eber Macomber, George Westfall, fireman, with three cars, baggage, coach and the Bishop's car set out from St. Thomas to Amherstburg — 111 miles. One stop was made at Charing Cross for wood and water — a stop shown on the despatchers sheet of four minutes — the run was completed in 109 minutes — not bad running for 1877 or any other time! These Baldwins were proud looking locomotives.

The passenger engines were very ornate — black walnut and white ash cabs, brass casings on domes and cylinders, brass bands holding the Russian iron jackets in place. They were equipped with Westinghouse straight air brake with six inch pumps. The freight engines were equally

handsome and all of these Baldwin engines had crown bar boilers — that being before the time of the “radial stay.”

Just a word about the men who ran these engines. First of all there was Leonard (Cappy) Wilson from Vermont. I fired for him for nearly three years and never addressed him other than Mister Wilson. During that time he was Mr. Wilson to me as long as he lived even though I was his superior officer during the year 1901. Then there was Jack (Copetown) McAdam, Leonard Wilson, Charlie McCall, James Scallion, Simeon Dunn, Jack Savigny, Jack Schilling, Billie Vipham, Aron Cady, Bobbie Brown, Billie Sayles, George Upper, Ira Casey, John Truman, Billie Hunt, Jimmie Frost and Frank Queen, others too — whose names I have forgotten. Many of them came to work in Top hats and white vests — wood burners were not as messy as coal burners. As a boy and man, I never knew a finer lot of men.

Although not a part of the original Canada Southern equipment, I well remember the ten-wheelers that were subsequently purchased by the Michigan Cenral. The first, No. 277, was built at Schenectady in 1885 and designed by Charles E. Smart, Master Mechanic of the M. C. and a A. J. Pitkin of the locomotive works. The engine was a success but the firebox was too shallow, so much so that the flues were down in the fire when a good fire was being carried. After a three year test period, in 1888, twenty more of this type were placed in service, the only change made was to raise the cylinder saddle four inches and add four inches to the depth of the firebox.

These were fine locomotives and I'll recite an instance of their performance. In April, 1893, a large party of executives left Chicago in in three parlor (private) cars on short time to make contact with a party of state officials at Buffalo. We were told to spare no means to get them there in time. At that time I was the Travelling Engineer on the Canadian Division and I rode these engines from Windsor to Victoria (now Fort Erie), a distance of 229 miles flat. The train consisted of three private cars and one coach. We made one stop at St. Thomas, to change engines. No official figures of this run were ever published but the conductor and myself made some of our own, which I assure you are correct. The OVER ALL figures of this trip, showed 72 and a fraction miles per hour being made from RIVER to RIVER. These ten wheelers were the most locomotive per pound of weight of any I ever ran or rode upon.

Our first General Manager (Managing Director) was W. K. Muir and he was followed by Wm. Perry Taylor, who remained in that position until the M. C. took over in 1883. James Webster and Edward P. Murray were the Superintendents. Our Master Mechanics were C. E. Benton, John Orrton and W. A. Short. The first rails we had were rolled in Sheffield, England and weighed 60 pounds to the yard. I'm going to conclude in stating that the old Canada Southern Ry., now the Canada Division of the New York Central System, is the fastest piece of railroad in this continent, if not in the world and I'm certain that I am safe in saying that in the seventy-four years of operation, it has never killed a passenger!

The following roster of Canada Southern Locomotives is taken from "Brown's Historical Manual of Canadian Railways." The author very gallantly acknowledges that members such as Donald R. MacBain, Carl F. Graves and Charles Fisher furnished about 95% of the information — we should not overlook the kindness of the locomotive builders and Mr. H. R. Benson, Sup't of Equipment, New York Central Lines who helped the latter.

In discussing this roster, Nos. 37 to 87 in the original (1871) series, were never used. It was evidently the intention to assign Nos. 37 — 50 to the locomotives of the T. C. & D. R. R., but, in order to prevent possible duplication and confusion with the locomotives of other roads at Toledo and Detroit, these numbers were never used. Nos. 51 — 87 were owned by the New York Central & Hudson River, but these numbers were never applied, the engines being carried under a New York Central number and since they were used in Canada, there was little chance that they would conflict with even the same numbers on that road. When the Michigan Central assumed control, in 1883, all of the Canada Southern locomotives were renumbered in the 300 series of that road.

C. S. Nos.	M. C. No.						
	1883						
1	339	4-4-0	Baldwin	2595	1871	16 x 24"	60"
2	340	4-4-0	Baldwin	2596	1871	16 x 24"	60"
3	328	4-4-0	Baldwin	2761	1872	16 x 24"	61"
4	341	4-4-0	Baldwin	2765	1872	16 x 24"	61"
5	342	4-4-0	Baldwin	2789	1872	16 x 24"	61"
6	343	4-4-0	Baldwin	2797	1872	16 x 24"	61"
7	344	4-4-0	Baldwin	2903	1872	15 x 22"	57"
8	345	4-4-0	Baldwin	2947	1872	16 x 24"	62"
9	346	4-4-0	Baldwin	2970	1872	16 x 24"	62"
10	329	4-4-0	Baldwin	3040	1872	16 x 22"	68"
11	330	4-4-0	Baldwin	3041	1872	16 x 22"	68"
12	331	4-4-0	Baldwin	3069	1872	16 x 22"	68"
13	332	4-4-0	Baldwin	3072	1872	16 x 22"	68"
14	326	4-4-0	Baldwin	3029	1872	15 x 22"	57"
15	327	4-4-0	Baldwin	3324	1873	15 x 22"	57"
16	333	4-4-0	Baldwin	3075	1872	16 x 22"	68"
17	334	4-4-0	Baldwin	3077	1872	16 x 22"	68"
18	347	4-4-0	Baldwin	3080	1872	16 x 24"	62"
19	348	4-4-0	Baldwin	3079	1872	16 x 24"	62"
20	335	4-4-0	Baldwin	3270	1873	16 x 24"	68"
21	336	4-4-0	Baldwin	3274	1873	16 x 24"	68"
22	337	4-4-0	Baldwin	3295	1873	16 x 22"	68"



C. S. Nos.      M. C. No.  
1883

23		338	4-4-0	Baldwin	3296	1873	16 x 22"	68"
24		349	4-4-0	Baldwin	3233	1873	16 x 22"	62"
25		350	4-4-0	Baldwin	3234	1873	16 x 24"	62"
26		351	4-4-0	Baldwin	3245	1873	16 x 24"	62"
27		352	4-4-0	Baldwin	3247	1873	16 x 24"	62"
28		321	0-4-0	Baldwin	3198	1873	15 x 22"	50"
29		322	0-4-0	Baldwin	3200	1873	15 x 22"	50"
30		323	0-4-0	Baldwin	3331	1873	15 x 22"	50"
31		324	0-4-0	Baldwin	3334	1873	15 x 22"	50"
32	112	315	4-4-0	Grant		1873	16 x 24"	50"
33	113	316	4-4-0	Grant		1873	16 x 24"	50"
34	114	317	4-4-0	Grant		1873	16 x 24"	50"
35	115	318	4-4-0	Grant		1873	16 x 24"	50"
36	116	319	4-4-0	Grant		1873	16 x 24"	50"
TCS&D	130	301	0-4-0	Hinkley		1874	16 x 22"	44"
TCS&D	48	302	0-4-0	Hinkley		1874	15 x 22"	44"
TCS&D	129	303	0-4-0	Hinkley		1874	15 x 22"	44"
TCS&D	51	304	0-4-0	Hinkley		1874	16 x 22"	44"
TCS&D	33	305	4-4-0	Hinkley		1873	15 x 22"	51"
TCS&D	101	306	4-4-0	Hinkley		1873	15 x 22"	51"
TCS&D	103	307	4-4-0	Hinkley		1873	15 x 22"	51"
TCS&D	104	308	4-4-0	Hinkley		1873	15 x 22"	51"
TCS&D	36	309	4-4-0	Hinkley		1874	16 x 24"	63"
TCS&D	106	310	4-4-0	Hinkley		1874	16 x 24"	63"
TCS&D	107	311	4-4-0	Hinkley		1874	16 x 24"	63"
TCS&D	108	312	4-4-0	Hinkley		1874	16 x 24"	63"
TCS&D	110	313	4-4-0	Hinkley		1874	16 x 24"	63"
TCS&D	111	314	4-4-0	Hinkley		1874	16 x 24"	63"
NYC&HR	600	388	4-4-0	Schenectady	1079	1877	17 x 24"	60"
NYC&HR	601	389	4-4-0	Schenectady	1080	1877	17 x 24"	60"
NYC&HR	602	353	4-4-0	Schenectady	1081	1877	17 x 24"	60"
NYC&HR	603	354	4-4-0	Schenectady	1082	1877	17 x 24"	60"
NYC&HR	559	355	4-4-0	Schenectady	1163	1879	17 x 24"	60"
NYC&HR	560	356	4-4-0	Schenectady	1164	1879	17 x 24"	60"
NYC&HR	561	357	4-4-0	Schenectady	1165	1879	17 x 24"	60"
NYC&HR	562	358	4-4-0	Schenectady	1166	1879	17 x 24"	60"
NYC&HR	563	359	4-4-0	Schenectady	1167	1879	17 x 24"	60"
NYC&HR	564	360	4-4-0	Schenectady	1083	1878	17 x 24"	60"
NYC&HR	565	361	4-4-0	Schenectady	1087	1879	17 x 24"	60"

C. S. Nos.      M. C. No.  
1883

NYC&HR	566	362	4-4-0	Schenectady	1105	1879	17 x 24"	60"
NYC&HR	567	363	4-4-0	Schenectady	1108	1879	17 x 24"	60"
NYC&HR	568	364	4-4-0	Schenectady	1107	1879	17 x 24"	60"
NYC&HR	569	365	4-4-0	Schenectady	1110	1879	17 x 24"	60"
NYC&HR	570	366	4-4-0	Schenectady	1111	1879	17 x 24"	60"
NYC&HR	571	367	4-4-0	Schenectady	1112	1879	17 x 24"	60"
NYC&HR	572	368	4-4-0	Schenectady	1113	1879	17 x 24"	60"
NYC&HR	573	369	4-4-0	Schenectady	1114	1879	17 x 24"	60"
NYC&HR	574	370	4-4-0	Schenectady	1115	1879	17 x 24"	60"
NYC&HR	575	371	4-4-0	Schenectady	1116	1879	17 x 24"	60"
NYC&HR	576	372	4-4-0	Schenectady	1117	1879	17 x 24"	60"
NYC&HR	577	373	4-4-0	Schenectady	1119	1879	17 x 24"	60"
NYC&HR	578	374	4-4-0	Schenectady	1120	1879	17 x 24"	60"
NYC&HR	579	375	4-4-0	Schenectady	1121	1879	17 x 24"	60"
NYC&HR	580	376	4-4-0	Schenectady	1123	1879	17 x 24"	60"
NYC&HR	581	377	4-4-0	Schenectady	1131	1879	17 x 24"	60"
NYC&HR	582	378	4-4-0	Schenecady	1133	1879	17 x 24"	60"
NYC&HR	583	379	4-4-0	Schenectady	1134	1879	17 x 24"	60"
NYC&HR	584	380	4-4-0	Schenectady	1136	1879	17 x 24"	60"
NYC&HR	585	381	4-4-0	Schenectady	1137	1879	17 x 24"	60"
NYC&HR	586	382	4-4-0	Schenectady	1138	1879	17 x 24"	60"
NYC&HR	587	383	4-4-0	Schenectady	1139	1879	17 x 24"	60"
NYC&HR	588	384	4-4-0	Schenectady	1141	1879	17 x 24"	60"
NLC&HR	589	385	4-4-0	Schenectady	1143	1879	17 x 24"	60"
NYC&HR	590	386	4-4-0	Schenectady	1144	1879	17 x 24"	60"
NYC&HR	591	387	4-4-0	Schenectady	1145	1879	17 x 24"	60"
NYC&HR	592	325	2-6-0	Schenectady	1197	1879	17 x 22"	50"
88		314	4-4-0	Grant		1880	16 x 24"	60"
89	109	320	4-4-0	Grant		1880	16 x 24"	60"
90		390	4-4-0	Schenectady	1664	1882	17 x 24"	64"
91		391	4-4-0	Schenectady	1665	1882	17 x 24"	64"
92		392	4-4-0	Schenectady	1666	1882	17 x 24"	64"
93		393	4-4-0	Schenectady	1667	1882	17 x 24"	64"
94		394	4-4-0	Schenectady	1668	1882	17 x 24"	64"
95		395	4-4-0	Schenectady	1669	1882	17 x 24"	64"
96		396	4-4-0	Schenectady	1670	1882	17 x 24"	64"
97		397	4-4-0	Schenectady	1671	1882	17 x 24"	64"
98		398	4-4-0	Schenectady	1672	1882	17 x 24"	64"
99		399	4-4-0	Schenectady	1673	1882	17 x 24"	64"

C. S. Nos.	M. C. No.							
	1883							
100	400	4-4-0	Schenectady	1676	1882	18 x 24"	69"	
101	401	4-4-0	Schenectady	1674	1882	17 x 24"	64"	
102	402	4-4-0	Schenectady	1675	1882	17 x 24"	64"	

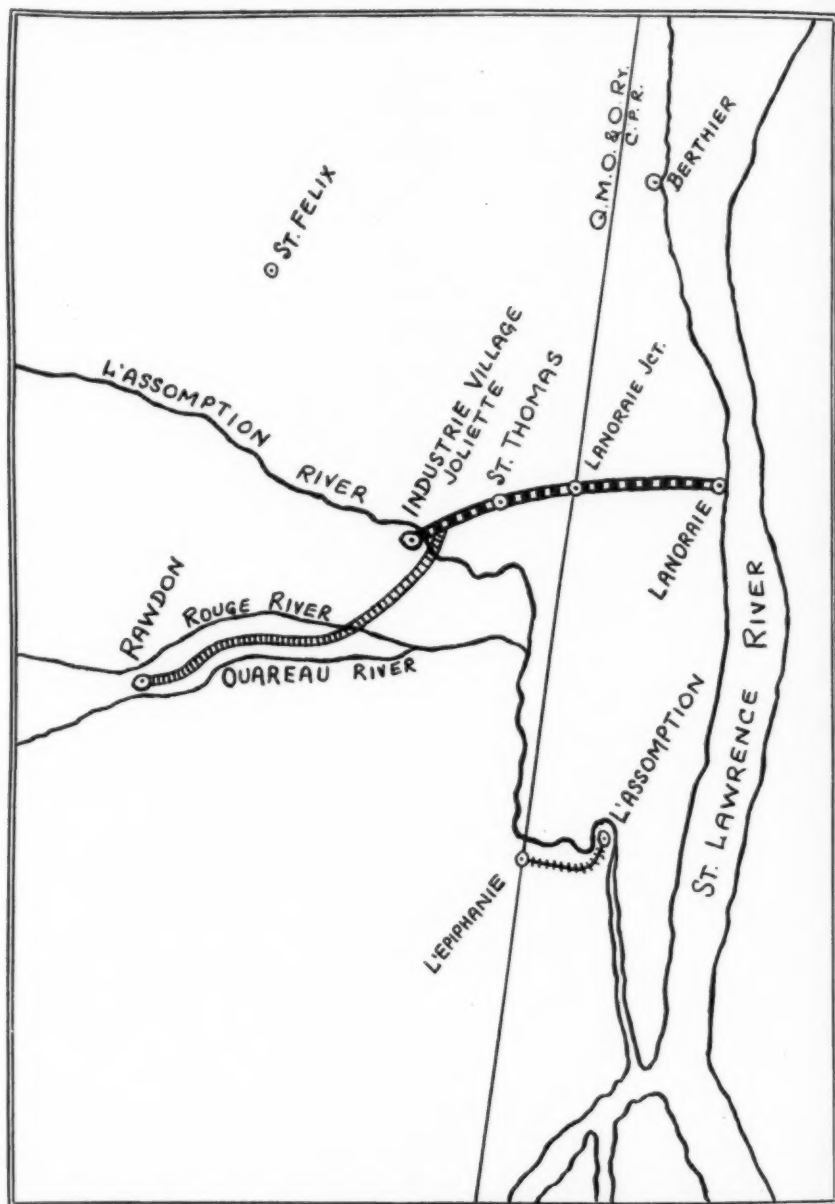
T. C. S. & D. No. 111 was sold to the Brantford, Waterloo & Lake Erie Ry. in 1889 and the Grant engine, C. S. No. 88 was brought over in its place. One other change not shown on the above list, C. S. No. 25 was rebuilt for passenger service and renumbered 3. The assumption is made that the No. 3 was renumbered 25.

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Our member, Mr. Donald R. MacBain, author of this sketch, entered the service of the Canada Southern Ry., as fireman, Apr. 9, 1879. Four years later he was transferred to the Main Line in the same capacity and on Jan. 16, 1884, after passing a good examination, was promoted to engineer and transferred to the Canada Division. Six years later he was promoted to Traveling Engineer of the same division and three years afterwards he was transferred to the U. S. Division. From 1900 to 1902, he was Master Mechanic at Michigan City, Indiana; St. Thomas, Ontario and Jackson, Michigan. July 23, 1906 saw him appointed Ass't. Supt. of Motive Power at Jackson and a week later, during Mr. Bronner's leave of absence, he was the Acting Sup't of Motive Power. March 31, 1908, he was appointed Ass't. Supt. of Motive Power of the N. Y. C. & H. R. R. R. at Albany, N. Y., and two years later he was the S. M. P. of the L. S. & M. S. and leased lines at Cleveland, Ohio. June 1, 1919, he was appointed Ass't General Manager, N. Y. C. Lines West of Buffalo; on March 1, 1926 he was made the General Manager and on July 1, 1931 he was made Vice President and General Manager, at Cleveland, Ohio.

On January 1, 1932, after fifty-two years of service with the New York Central and its affiliated roads, he was retired. He still resides in Cleveland, summers at Niagara-on-the-Lake, Ontario, still retains his interest in the railroad and the "iron horse" and is held in genuine affection and esteem by all who worked for him or were acquainted with him.





ST. LAWRENCE INDUSTRIE VILLAGE RAILWAY

# The St. Lawrence and Industrie Village Railway

By ROBERT R. BROWN

One hundred years ago, on July 28th 1847, the province of Lower Canada (now Quebec) granted a charter incorporating Le Chemin a Rails du St. Laurent et du Village d'Industrie, which commenced operating two years later, and of which the modernized surviving portion is now the oldest section of trackage operated by the Canadian Pacific Railway Company. Lying about 50 miles northeast of Montreal, it now forms that part of the St. Gabriel branch between Lanoraie Jct. on the Montreal-Quebec line, and Joliette, a distance of 6.3 miles.

In the early days, practically the entire population of Canada was settled on or near the banks of the many rivers and lakes and it was only in the first two decades of the nineteenth century that the back country began to be opened up; first by lumbermen and later by permanent settlers, and before long a number of small villages sprang up around the many water power sites, often at considerable distances from the busy waterways. One of these was the village of Industrie, now the important town of Joliette, renamed in honor of its founder in 1863, located at the falls of the L'Assomption River, about 20 miles up from the head of navigation on that stream and about 12 miles from the nearest point on the St. Lawrence River.

Barthelmy Joliette was a half-orphan raised and given an excellent education by his uncle, a prominent notary living in L'Assomption, but he seems to have possessed many of the qualities of his great grand uncle, the famous explorer Louis Joliet, and, not caring for the tranquility of the legal profession, he soon became actively engaged in the colonization of the L'Assomption River valley. He founded the village of Industrie in 1823, built several mills at the falls, erected the church and presbytery in 1843, the college and distillery in 1845 and finally in 1849 the railway.

Transportation to the outside world was very difficult; the roads were almost impassable except in winter, when loads of considerable weight could be handled on sleighs, and the economical shipping of

lumber was almost impossible. It is said that a German settler named Loedel was the first to suggest the possibility of building a railway but it was Joliette who secured the charter, raised the necessary capital and carried the project through to a successful conclusion and it is to him that all honor is due.

By its charter, the company was authorized to issue up to 480 shares of 25 pounds each, a total of 12,000 pounds (\$48,000.00), but actually the paid up stock amounted to \$42,100.00. As the cost of the road and equipment to 1876 was reported to have been \$64,016.00, it is evident that improvements made from time to time were wisely charged to revenue instead of capital. There was a good deal of competition between the villages along the river for the privilege of being the southern terminus of the railway. L'Assomption, then a town of relatively greater importance than now, seemed to be the most favored but finally Lanoraie was chosen because of the shorter distance and more level country. Three hundred men, with axes, picks and shovels, started work on the road in the spring of 1848 but progress was slow and by autumn of 1849 it was completed from Lanoraie only to St. Thomas, the remaining 4 miles being completed early in the spring of 1850.

The official opening of the line took place on May 1st 1850 and was an event long remembered. In other parts of the country, especially in the west in later years, the opening of a new railway might be marked only by the issue of a typewritten temporary time table pending the next regular issue, but not so in the province of Quebec. Such inauguration was almost invariably made the occasion for a celebration and banquet, graced by the presence of the local dignitaries of the church and state, unlimited oratory and usually the new railway was given ecclesiastical blessing. The opening of the Industrie railway was no exception.

The original track structure consisted of pine rails, 6" x 7", with the upper edges bevelled so that the top surface was about 3 inches wide but they proved to be too slippery when wet, so strips of wrought iron, 3" x 1/2", were spiked along the top of the wooden rails. Later on, about 1875 or 1876, the wood and strap iron rails were replaced by 56 lb. iron T rails.

The terminus at Lanoraie consisted of a long wooden wharf, stopping point for river steamboats and lumber barges; a station building; a large fuel shed; and a small turntable. There was a short but very steep incline from the wharf up the river bank to the station and horses hauled the cars up one by one.

As soon as the railway was completed, an extension was projected to run from Industrie in a westerly direction to the village of Rawdon, on the Ouareau River, and accordingly a charter was granted on August 10th 1850 to the Industrie Village and Rawdon Railway. The exact date of its completion is not known but is believed to have been in 1851 or 1852; it was in regular operation throughout the summer of 1853. It was a separate company but, having no rolling stock of its own, was



operated by the St. Lawrence and Industrie Village Railway. Traffic was very light and finally the destruction of the bridge over the Rouge River by spring freshets caused it to be abandoned. The last reference to it was in 1872 but it is believed that the branch was discontinued some years before that.

Little is known about the officials of the two roads; M. N. Panneton was secretary-treasurer of the St. Lawrence and Industrie Village Railway, J. Champagne was superintendent, Asa Martin was the first engine driver followed later by Tom Sheppard and Denis Giguere was conductor. J. U. Donvin and P. D. Brown were president and treasurer of the Industrie Village and Rawdon Railway.

The rolling stock was of great interest and consisted of three small locomotives and 22 small four-wheel cars — 2 first class passenger cars, 2 second class passenger cars, 1 baggage car, 5 box cars and 12 platform cars — all bought from the Champlain and St. Lawrence Railroad. The passenger cars were divided into three compartments in the English style and probably were built in Troy, N. Y., being identically the same as the cars built there for the Rensselaer and Saratoga Rail Road in 1835. The freight cars were built by Ward Brothers of Montreal.

The locomotive "Dorchester" was delivered at Lanoraie in the autumn of 1849 and ran between Lanoraie and St. Thomas until the close of navigation about December 1st. Originally 0-4-0 type, with 10 x 16" cylinders and 48" drivers, it was built in 1836 by Robert Stephenson & Company, of Newcastle-on-Tyne, but it is believed that it was rebuilt as a 4-2-0 type by the Champlain and St. Lawrence Railroad several years before it was sold. It continued in service until about 1864 when it was derailed near St. Thomas and badly damaged. The wrecked engine was then sent to the Carrier and Laine Foundry at Levis but it was found to be not worth repairing and was scrapped. One of the brass name plates was wrenched off in the wreck and lost but many years later it was turned up by a farmer while plowing and now it is preserved in the museum in Joliette college. The "Dorchester" was the first locomotive in Canada and by its service on the Champlain and St. Lawrence Railroad it was the first to operate on any line now forming part of the Canadian National Railways and similiary by its use on the Industrie line it was the first to run on any line forming part of the Canadian Pacific Railway.

The second locomotive was the "Jason C. Pierce", a 4-2-0 type built in 1837 by William Norris, of Philadelphia, it had 10 $\frac{3}{4}$  x 20" cylinders and 46 $\frac{1}{2}$ " drivers. Keefer's report of 1860 indicates that it was then 4-4-0 type, so the change if made at all must have been made by the Champlain and St. Lawrence Railroad prior to 1850 when the engine was sold to the St. Lawrence and Industrie Village Railway. It always bore its original name but toward the end it was generally known by its nickname "Pacaud", derived from the name of a prominent politician. In 1881 it became no. 33 of the Quebec, Montreal, Ottawa and Occidental Railway, the following year North Shore Railway no. 1 and in 1885

Canadian Pacific Railway no. 197. It was probably sold, in October 1886, to the L'Assomption Railway and destroyed by fire shortly afterwards.

In 1860 the locomotive "Montreal" was bought from the Montreal and Champlain Railroad (formerly Champlain and St. Lawrence Railroad) and delivered the following spring. It was 4-4-0 type, with 11 x 16" cylinders and 54" drivers and was built by Baldwin in 1847, builder's no. 265. Some time after 1860 it was renamed "Laprairie" and this change misled Canadian railway historians into inventing a wholly imaginary Norris locomotive and it was only with the discovery in 1940 of the Keefer report that the mystery was finally cleared up. In 1881 the "Laprairie" became Quebec, Montreal, Ottawa and Occidental Railway no. 34, in 1882 North Shore Railway no. 2, in 1885 Canadian Pacific Railway no. 332 and in 1886 it too was sold to the L'Assomption Railway and destroyed by fire soon after.

No effort was ever made to break speed records and the average was 12 miles per hour for both passenger and freight trains. Barthelmy Joliette did not long survive the completion of the railway and died on June 21st 1850. The nearest doctor was summoned from Berthier and a special train was sent to bring him up from Lanoraie; the trip was made in 55 minutes and that was long considered a record. Much information was supplied by Dr. Sabourin of Lanoraie and he related how on one occasion the "Jason C. Pierce" was standing at the Lanoraie station when a small boy climbed up, opened the throttle and then jumped off. The engine started up the line and when engineer Tom Sheppard discovered what had happened, he and conductor Denis Giguere commandeered a horse and buggy and galloped up a parallel road about 5 miles, then abandoning their borrowed steed, they dashed across an intervening field and captured the errant locomotive. One wonders if Dr. Sabourin could have been the small boy. On another occasion the locomotive, probably the "Jason C. Pierce", broke down in the midst of a dense forest about midway between Lanoraie and Industrie and while Sheppard was making the necessary repairs, a passenger, who had with him a coil of light rope, tied one end of the rope to the back of the train and the other end to a convenient tree with results very embarrassing to the engineer.

Each year the St. Lawrence and Industrie Village Railway carried from 5,000 to 9,000 passengers and about 5,000 tons of freight, the latter consisting principally of groceries, hardware and dry goods northbound and lumber and other products of the forest and of farms southbound. Sawn lumber often exceeded 4,000,000 feet during a summer shipping season. The government report of 1853 gives with amusing detail a list of the items of freight carried that year on the Rawdon extension; northbound, among other things, groceries, dry goods, hardware, bricks, 1 piano, 1 tombstone, 10 dozen bottles of gin, 90 barrels of whiskey and 1 barrel of Epsom salts! Southbound, vegetables, eggs, cattle, 2,000,000 feet of sawn lumber, cart wheels, fence posts, shingles and potash. Freight rates averaged 16½ cents per ton mile and passenger fares were 4 cents per mile first class and 3 cents second class.

Two financial statements are available and these indicate that the railway was reasonably prosperous:

	1854	1876
REVENUE		
Passenger	1565.90	3863.78
Freight	10526.20	6192.46
Miscellaneous		302.60
	12092.10	10358.84
EXPENSES		
Maintenance of way		4173.46*
Motive power		2332.04
Car expenses		152.32
General operating expenses		2802.34
	7886.50	9460.16
OPERATING PROFIT	4205.60	898.68

\*Includes cost of iron T rails which replaced the original wood and strap iron rails.

During the late seventies, when the Quebec provincial government was building the Quebec, Montreal, Ottawa and Occidental Railway (now Canadian Pacific Railway) it was found that the most suitable gravel for ballast was located at St. Felix de Valois, 6 miles north of Joliette. Efforts were made to purchase the St. Lawrence and Industrie Village Railway but the price asked, \$60,000.00, was thought to be too high and was rejected by the government. Interests closely connected with the contractor and management of the Q. M. O. & O. then bought up most of the shares of the Joliette line, thus getting control of it, and then an agreement was made between the two railways, effective December 13th 1880, whereby the Q. M. O. & O. was to operate the Joliette line, provide the rolling stock, run the trains and pay operating expenses. The St. Lawrence and Industrie Village Railway was to maintain the road, except the part between Lanoraie and Lanoraie Jct., which was abandoned, and the net receipts were shared; one-third to the Joliette company and the balance to the Q. M. O. & O. An extension was then built from Joliette to the gravel pit at St. Felix. This arrangement continued until August 25th 1881 when an Order-in-Council was passed authorizing the purchase of the Joliette line by the government owned Q. M. O. & O. but in the mean time the price had gone up to \$63,000.00 plus \$18,000.00 for alleged improvements and \$24,000.00 for the St. Felix extension!

The Eastern Division of the Quebec, Montreal, Ottawa and Occidental Railway, including the Joliette branch, was sold on March 4th 1882 to the North Shore Railway, which was controlled by the Grand Trunk Railway, and finally on September 20th 1885 to the Canadian Pacific Railway Company which has owned and operated it ever since.

# The Buffalo & Susquehanna Railroad Company

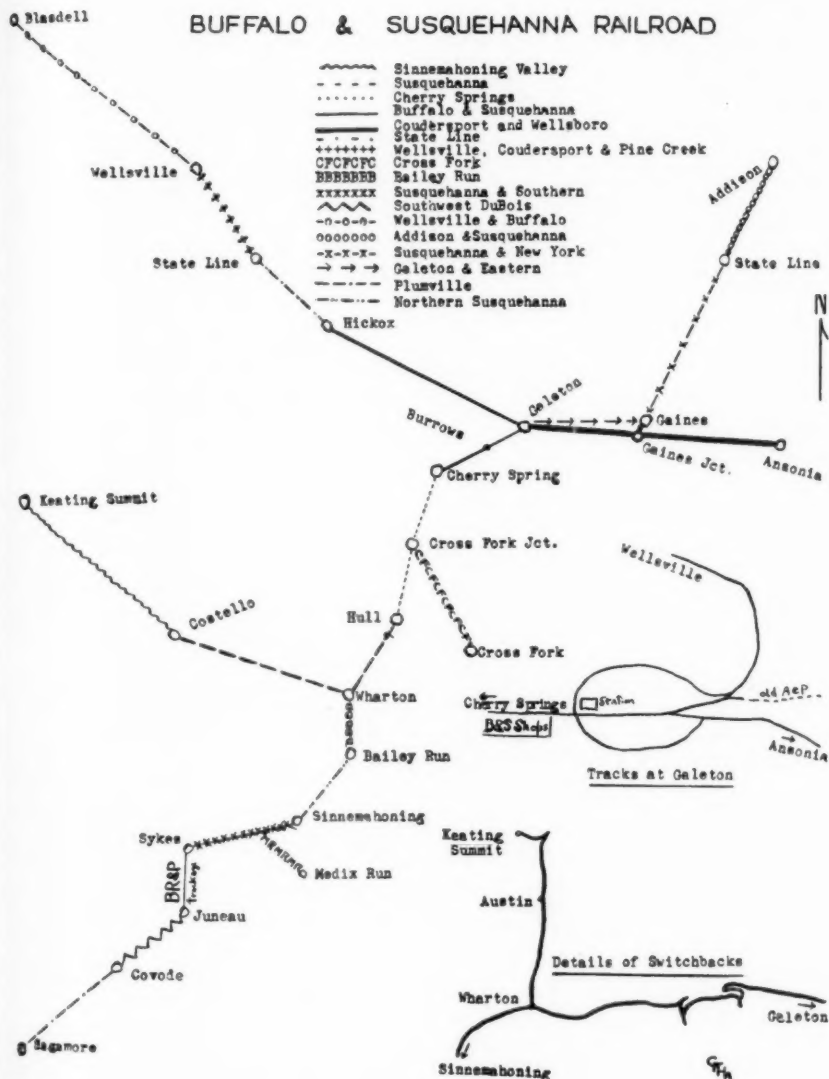
By C. F. H. ALLEN

The Buffalo & Susquehanna Railroad Company had its origin in a puny infant consisting of a crude, country, circular saw mill near Gardeau, on the outskirts of a huge virgin hemlock forest, covering hundreds of thousands of acres, and which was the predecessor of all future operations, in this particular venture. This mill proved a mighty force of ingenuity and energy and a lasting factor in the development and construction of mammoth band saw mills, manufacturing, mining, a standard railroad empire, as well as a steamship line on the Great Lakes, and blast furnaces at Buffalo. All occurred during a period of about twenty-five years, thus accomplishing the dreams, ambitions and purposeful energies of an aggressive, far-seeing executive in the person of Mr. F. H. Goodyear of Buffalo, N. Y.

The natural obstacles were enormous, both in securing and removing the timber, hemlock bark for tanning purposes, and refuse from the forest for pulpwood needed by paper mills and acid plants. A less venturesome figure would have been discouraged by the scope and magnitude of detail work involved in combating an array of almost obstreperous natural obstacles, to extending log lines and railroads, to coordinating the manufacture and sale of products removed from this wilderness, and to steadily forging ahead with plans of utilizing everything that would benefit the attainment of his objective. The first equipment was necessarily very crude, and sturdy manpower largely took the place of mechanical means for a long period.

There were heavy demands and a market for all forest products. The larger the scale of operations, the more economies could be effected, both to the manufacturer as well as the buyer; this proved a spur to greater and cheaper development. Thus within a short time, the cleared timber line reached the vicinity of high escarpment called Keating Summit (a station on the old B. N. Y. & P. Ry., about fourteen miles north of Emporium, and at the highest elevation between there and Buffalo, N. Y.) This point formed a natural watershed between the tributaries of the Allegheny and Susquehanna rivers. The main expanse of timber lay almost directly east of that point. It consisted of an almost unbroken wilderness, requiring the lumber company to construct tram roads and remove the timber in every hollow, ravine or run. This activity formed the nucleus of the Sinnemahoning Valley Railroad, which a few years later was destined to become the Buffalo & Susquehanna Railroad. Both Austin and Costello were born and existed as busy manufacturing centers for many years. Since they were located in the Sinnema-

BUFFALO & SUSQUEHANNA RAILROAD





honing Valley, it was a down-hill haul for this heavy forest tonnage. Large, modern band-saw mills were erected at the former point, with rail and mill repair shops, unloading docks at mill ponds, as well as yards for seasoning and loading docks for shipping manufactured lumber. Other companies, mainly engaged in kindling or light woodwork were encouraged and soon had practical plants in operation. At Costello everything centered around a large tanning enterprise.

One of the natural obstacles early encountered was a physical connection between this enterprise and the B. N.Y. & P. Ry. for the Goodyear operations were on the top of a high bluff east of Keating Summit, while the railroad, passing through a depression in crossing this divide, at a lower elevation of two or three hundred feet, made a direct connection impossible. The only feasible way this could be accomplished was by the construction of a switchback by the S.V.RR; this was completed at an early date and evidently was a forerunner of others built later on the main line. At that particular period, all of the general offices of the lumber company, as well as the railroad, had headquarters and supported a large force on the second floor of the passenger station at Austin. Shortly thereafter, these offices, with the exception of the operating and maintenance force, were moved to the Ellicott Square Building in Buffalo.

Inasmuch as there was direct connections between towns, it was logical to form the Sinnemahoning Valley Railroad, as a successor of the Goodyear Lumber Company, for public instead of private transportation. Its field was limited to the territory embracing Keating Summit, Austin and Costello, although it was also in process of extending eastward, wherein existed a densely forested wilderness stretching to a mountain range, running in a north-southerly direction, locally known as the Hog Back. This also formed a further watershed between the Allegheny-Susquehanna rivers, through additional tributary streams. This dense tract of virgin timber was largely held by the state and thus controlled by tax liens, or absentee ownership, with a few local squatters on its outskirts and perhaps options on certain sections by parties holding visionary, but not practicable business propensities. It was a section of approximately 1500 to 2000 square miles, located in Potter, Clinton and Elk Counties and the eastern portion of Cameron County.

On the top of this mountain range, a dense forest in every direction surrounded a camping spot, on the primitive trails of Indian bands. These trails later served as a highway for the pioneers who settled in the Allegheny watershed at Salamanca, Olean, Bradford, Coudersport and other points and who travelled or sought trade with others along the Susquehanna River, at Renovo, Jersey Shore or Williamsport. This particular point was called Cherry Springs at an early date, and still retains that name. Due south of this place lay other virgin lands in the Kettle Creek Valley, which were appealing to the Goodyear interests, both from a manufacturing and a transportation stand-point. However, it does not appear that they took any direct action toward acquirement



of these at the time the railroad was extended to that point, from the First Fork at Wharton, (thence through a place called Logue and Hull, on the western slope of the Hog Back mountain). From later observations and reasoning, as well as community of interest development, it is very evident that the Goodyears were instrumental in inducing Frank L. Peck of Scranton, Pa., to become infested, with the understanding that their railroad would provide an outlet for the manufactured material.

After a suitable time had elapsed and while the railroad was under construction from Hull to Cherry Spring; engineers and woodsmen were busy in this particular locality obtaining definite estimates on timber, bark, etc., and securing tracks, as well as making plans, wherein the Peck interests, incorporated under the cognomen known as the Lackawanna Lumber Co., founded the town of Cross Fork, built large mills and other conveniences, and provided logging roads. These roads or feeders, were operated by Lima, Shay-gearred locomotives, standard logging cars, steam log loaders and at that time all the modern improvements for diligent and economic operation by the Lackawanna Lumber Co. In the meantime, in order to ascend the abrupt mountain route of the B&SRR, engineers, after considering many "tunnel" plans, had determined to ascend this mountain from points east of Hull to the Summit by switch-back operation, and after attaining the summit to construct a standard roadbed from there to Cross Fork.

All of the foregoing information as to the development, led practically to a thorough plan for at least a twenty to twenty-five year period of intensely constructive and manufactory outlook; but, it was not yet a satisfactory solution of many problems. The Buffalo & Susquehanna Railroad had only one outlet for all of these products and that was at Keating Summit with the B. N. Y. & P. Ry. Naturally, if the railroad with this vast tonnage had more diverse, and especially eastern outlets with different railroads, they could affect greater proportion of through freight rates, by paying one against the other through divisions of tonnage. There were other factors, such as economies in operation by down grades, from this super-elevation. The "tunnel" plans were shuffled back and forth for a considerable period between traffic, engineering and construction offices. They did not effect the Cross Fork extension primarily, but arrived about the time construction was under way around Hull. The management was aware of the vast area on the eastern side of this mountain, in the Pine Creek territory, already in possession of interests indentified with the Addison & Pennsylvania Railroad. Naturally, if these could be secured and engineers considered it feasible, a tunnel could be constructed through this Hog Back mountain from near Hull to a place slightly west of a town (Corbett, not then existent, on the Pine Creek side, which would reduce the grade to a great extent and favor operations on both east and west-bound traffic, saving much time and a large amount of track, and possibly heavy snowstorms in the winter.

This tunnel proposition as well as many other surveys were kicked around for a long period of time, until the company secured the services of a practical engineering authority, in the person of Mr. Henry Herden. Mr. Herden had been secured from the Fall Brook Railroad, and the McGee interests, and placed in charge of the railroad with full authority as Chief Engineer. He decided that switch backs, as the situation then existed, were practical, economical and available for efficient operations. These unique methods of crossing mountains have frequently been termed engineering feats, but Mr. Herden, with a wry smile, on many occasions termed them engineering "freaks".

Cherry Springs, with an elevation of upwards of 2,000 feet, and often above the cloud line of fogs which arose from surrounding valleys at certain seasons of the year, presented a panoramic view of ocean grandeur, with only some very distant peaks piercing the mass billowing as far as the eye could reach. It was also a terminus for the railroad venture for some time, and proved to be the point, where very important specific decisions, as to the future, required immediate attention.

The Goodyear interests looked with covetous eyes on the eastern slope of this mountain, with its magnificent area of standing timber and the vista of thickly forested adjacent hills, diminishing in the hazy distance to the head waters of Pine Creek. Practically all of this area was naturally contiguous to Galeton, where for years R. W. Clinton & Sons possessed a large saw mill, and where a mammoth sole-leather tannery was owned and operated by W. & L. R. Gale. Both of these firms were vitally interested in the disposition of this timber supply for the maintenance of their business, and at first were soundly opposed to the invasion of the territory by foreign interests, engaged in similar trades. The people of Galeton also owed much to the Addison & Pennsylvania Railroad and in a measure were greatly dependent upon the railroad for their livelihood and future existence. Many plans were proposed to block an extension at the head waters of Pine Creek, and intense interest and discussions ensued for a considerable period. One project which appeared to be the most feasible, was the A&PRR to extend their lines to the Hog Back mountain through the only valley, and thus block the B&SRR, but it would require much money, time, and work, which the stockholders of the former road were loath to contribute. Other forces were not idle, for the B&SRR had already thousands of acres tied up, and with their financial background, could readily obtain more, if they reached Galeton and made captives of its vital industries.

Another phase of human characteristics entered the picture, at this point, and manifested itself in this situation. It was a period when business firms had a tendency to expand—enter into mergers. Nearly every good-sized town in this section of the state had one or perhaps more small but efficient tanneries, and their sustenance depended on an ample supply of hemlock bark for tanning purposes. Four large industries were located on the A&PRR. A combine of tanning interests was formed, nearly all of these plants entering the consolidation; it became a corporation called the United States Leather Company and handling

the sale of finished products, and the purchase of hides, the majority of which were acquired from South America. The manufacturing processes were delegated to specific operating companies, such as the Penn Tanning Co., the Elk Tanning Co., etc., under different names, for each particular location. The latter also handled the bark facilities and all operations connected with the production of leather. With a few exceptions these no longer represented individual independent firms at the point of operation as formerly. The Goodyear interests really found this condition an advantage, as if they could furnish the bark, they were necessarily in a good position to demand and dominate the traffic of manufactured leather. Eventually the tannery at Galeton entered the merger, as well as the principle ones on the A&PRR.

There was a strip of land surrounding the head waters of Pine Creek and at the base of the Hog Back Mountain extending a considerable distance upward in three directions, about which there is an interesting tale, ever since the advent of the B&SRR into Galeton; it has been retold so often that it has become a legend. It appears that the Goodyears had authorized persons, as well as civil engineers, busily surveying all of this territory and endeavoring to secure the timber, also right of way for laying tracks, with options on private property. The saying is that on this particular lot, the owner (a squat, determined woodsman, living in a lonely crude dwelling nearby) would forbid any intruder from trespassing, with a display of gun-fire, aided by a ferocious dog, and these agents reported to their superiors that they were unable to accomplish anything. This situation, remaining in such a status for many months, exhausted the patience of Mr. Frank Goodyear, so he decided that he would undertake a personal visit. They met—one obdurate and showing open hostility; the other gracious as the circumstances would permit, yet firm and resolved to make a deal in some manner. Reasons were stated and instantly rejected; when standing on the uneven ground became tiresome, Mr. Goodyear sat down on a fallen log. The dog anxiously watched both, his eyes intent mainly on the intruder. The latter soon endeavored to make friends with the dog, and began an amiable conversation as to its merits, history, ancestors, and in the meantime observing and commenting favorably on its outstanding points, such as poise, searching eyes, determined manner, and other traits for which a canine is noted. The other subject was entirely forgotten for the time being. Mr. Goodyear offered to buy the dog; its master disagreed, but in an amiable manner. An impression of comradeship became apparent, and Mr. Goodyear raised the ante considerably without results. Sensing that the man was coming his way, he raised the price considerably; the man still objecting, he hurriedly told him that he would give that much as a partnership in the dog;—that is, each could have him half of the time,—as he would be in the vicinity more or less. The money angle predominated the ownership deal and he finally made a higher offer, and was answered, "That dawg ain't wurth et, but if you air so fond of thet onery dawg, take 'im." Mr. Goodyear said nothing further and prepared to go when the fellow called him back and wanted to know why he was so interested in the property. He

manipulated this conversation into such a channel of negotiating that he returned home with a bill of sale in his pocket, and although never disclosing the amount was content with the deal. By then giving the dog back to its original owner, he secured a staunch friend in that neck of the woods, and the obstacle on the road to Galeton was cleared.

Mr. Goodyear was an amiable and able negotiator and generally received whatever he desired. My opinion, is that the story is essentially true, as many times when acting as his amanuensis, and pausing to listen to perhaps heated arguments and deliberation with some of his intimates, presenting arbitrary views, his opinions would prevail, presumably with a slighting remark that they were receiving a "dog deal". However, his suave disposition did not change and only resulted in suppressed chuckles.

With the foregoing conditions disposed of, the B&SRR hurriedly finished surveys and commenced construction to Galeton, after purchasing available ample tracts of land in the valley near the junction of the main stream and its tributary, the West Branch. Shortly plans were completed for modern expansive car and locomotive repair shops, yards, station buildings, and other necessary facilities, and soon active development shaped these into realities. Negotiations were at once begun for business with the tannery firm and owners of the sawmill, who were loath to be tied up, but allowed track connections, and this resulted in much traffic being diverted from the A&PRR.

About that time also, considerable changes in the operation of the plants at Austin occurred. These were leased to Mr. Wm. H. Sullivan, a practical business man and a Mr. Daniel Collins, one of their mill foreman, who founded a firm called Sullivan & Collins, for manufacturing purposes, but the Goodyears retained their rail logging equipment and operations, as well as the sales portion of the business. Soon after, negotiations and offers of purchase were made for the Clinton mills and operations at Galeton, and in due time the transfer of ownership was affected. This action with the merger of the tannery virtually affected the traffic of the A&PRR and the destiny of that line had arrived.

The Clinton mill, while modern, was thoroughly overhauled. Circular saws were discarded, improved logging cradles and a double band-saw arrangement installed, with other extensive improvements, made this plant second to none, with an improved and enlarged output. Activities in railroading were at a maximum and construction crews were busily engaged in extending the main line south eastward along Pine Creek, to a connection with the Fall Brook Railroad system at Ansonia, for an eastern outlet via Corning, N. Y. to the D.L.&W.R.R. as well as the Lehigh Valley territory via the old Elmira, Cortland & Northern RR., and directly to the Erie Railroad there and the N. Y. Central system at Lyons, N. Y. Freight trackage rights soon followed.

Surveys also began north westward along the West Branch, ostensibly for removing timber in the West Branch watershed, but eventually this

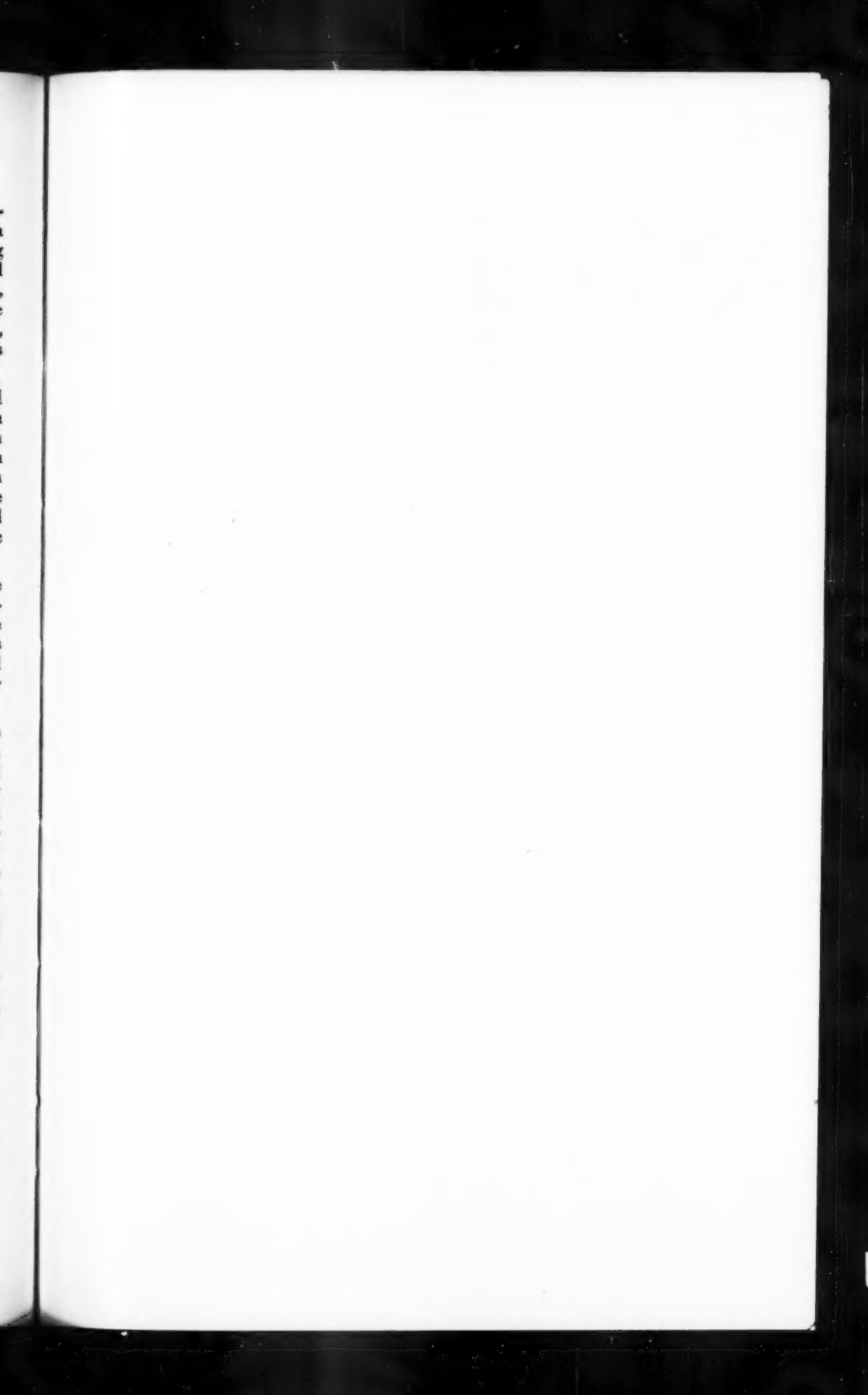
became a main line connecting with a small railroad called the Wells-ville, Coudersport & Pine Creek Railroad, running to Wellsville, with a direct connection to the Erie Railroad. The gradients on this line twisting among the high hills and many more elevated summits, such as Newfield Junction, with a connection to the Coudersport & Port Allegany Railroad, are heavy but practicable. The products of the Pine Creek valley were now firmly under the control of the Buffalo & Susquehanna Railroad, and there only remained the disposal of the A&P RR problem, which has been covered in other articles.

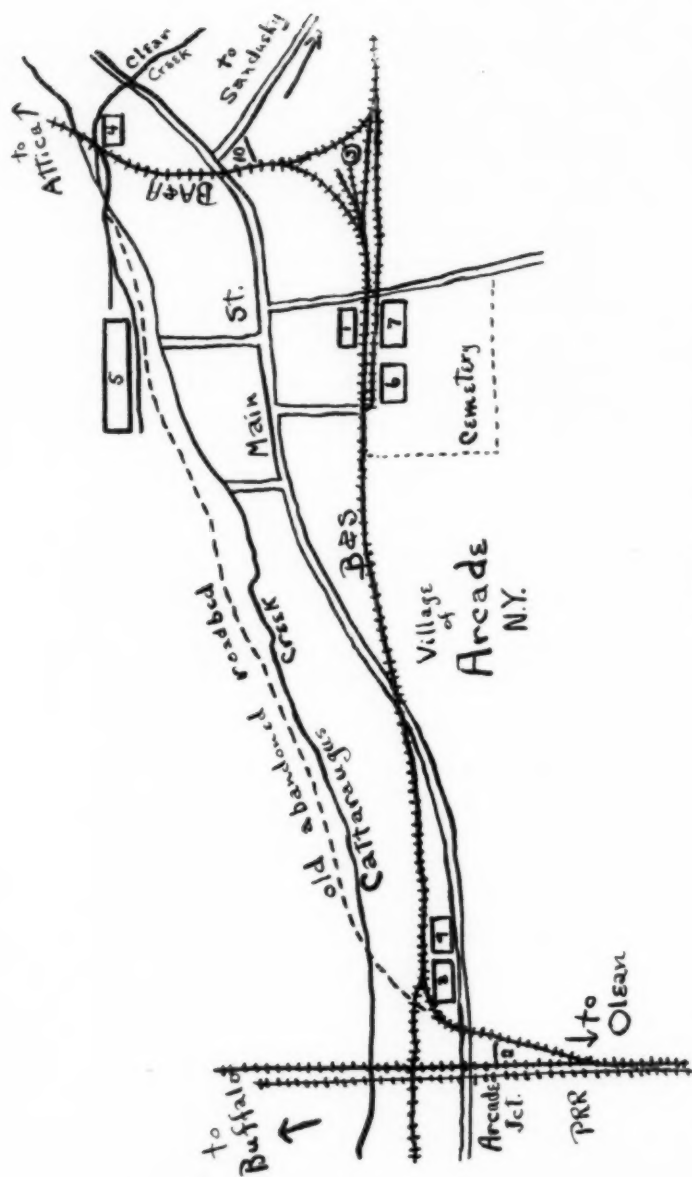
Millions of tons of freight including lumber, bark, logs, coal and other bulky freight have been handled over these mountains with a minimum of derailments or accidents, for many years. Logging trains in and around Austin, Cross Fork and Galetton used the main line from distant tram roads to the mills, with long logging trains including steam log loaders and performed their switching in the various yards. In the early history of the road, these logging trains had a sort of preferential treatment in movement over other freight, and even passenger traffic in some instances.

So far, the railroad leading southward from Wharton, along the Sinnemahoning has been neglected, but it was being operated for logging purposes over a bewildering network of tram roads, thence to the Austin and Costello manufacturing plants. This undertaking was in its infancy and it was essential for a period of years to strip the hills and mountains of their forest covering to supply freight traffic for other portions of the enterprise.

This section, however, after which the first railroad was named, was too localized for perpetuity, and it was changed and absorbed into a great organization which signified far-reaching territorial activity and service. Eventually, after the logging service was completed to a vicinity near the head waters of the Susquehanna River, other projects received attention. These involved extensive plans, surveys, and lengthy negotiations and correspondence concerning available timber lands, and finally coal outputs, with mining ventures and all of the ramifications, such as manufacture of coke, etc., or other commodities which would justify the construction of extensions to provide traffic, for the entire property. Thus, after some period, mining options were secured and large tracts opened for coal output, tipples, etc. A few miles from here near Penfield, a large coke plant was to be constructed, with the latest improvements, and nearby a mountain of excellent coal was secured, but nothing developed except the building of mammoth kilns, and borings in studies for quality, although the mines beyond Dubois were being operated, and are to this day.

The ultimate plan called for adequate mining facilities to supply blast furnaces on the lake front near Buffalo, with a steamship line on the Great Lakes to supply ore. The plans were sound and this arrangement would have supplied heavy traffic in each direction, but, alas, the financing through some unforeseen circumstances, with which I am not familiar, collapsed and the vast undertaking was torn from its moorings.





# LEGEND

- |                     |                       |
|---------------------|-----------------------|
| 1 B&S Depot         | 6 Stockyards          |
| 2 PRR Station       | 7 Freight House       |
| 3 Roundhouse        | 8, 9 Odell & Eddy Co. |
| 4 Oak Knitting Co.  | 10 B&A Depot          |
| 5 Merrill Coule Co. |                       |







A slight misunderstanding on the B. & S. at Genesee, Pa.

When engaged at Buffalo, after the rails had been removed and shipped abroad during the First World War, from the section between Wellsville and Blaisdall, it was the common understanding that the lake frontage, brought about three million dollars. The rail from main line, sidings, bridges, viaducts, produced another source of immense revenue. The entire right of way, averaging about ninety to one hundred or more feet width, had been purchased direct from owners, never condemned for railroad purposes) and deeds were on file at Buffalo. It was then proposed to sell this right of way to the State of New York for highway purposes, but whether this was ever accomplished is not known. All station buildings and equipment, including rolling stock, was disposed of, and the rails were sent to France for rebuilding the French railways. The amount received for this steel, which was of high quality, and over 100 miles in length, the writer understands brought more than the original cost. Many of the truss steel bridges were furnished the state for highway development.

This is a sort of Horatio Algiers tale of the mighty accomplishments in the lifetime of an aggressive, fearless, diligent and accomplished business man, whose tireless energies provided a livelihood for a vast army of employees, and their affection for him has never diminished.

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## NOTES ON THE BUFFALO & SUSQUEHANNA

### *including Wellsville & Buffalo*

Since the appearance of the interesting paper by Capt. Robinson in Bulletin No. 49 (May, 1939) on the Buffalo & Susquehanna, additional information has been secured which supplements and brings the history up to date. A map has been constructed from blueprints obtained from the Office of Engineer, Galeton, Pa., and from old timetables.

The Buffalo & Susquehanna Railroad Corporation and its predecessors totalled 20 different corporations, 4 of which did no construction. (Table I) It controlled through ownership of the entire capital stock the properties of the Wellsville, Coudersport and Pine Creek Railroad Co., (10.118) mi.) and the Addison and Susquehanna Railroad Co. (9.76 mi.) whose properties it holds through lease agreements.

The Addison and Susquehanna Railroad Co. was incorporated on June 21, 1898, for the purpose of acquiring that part of the property of the Addison and Pennsylvania Railway that was located in the state of New York. The date of organization was August 17th of that year.

The connections with other railroads, as of 1925 were as follows:

New York Central: Ansonia, Cowanesque, Elkland

Pennsylvania: Driftwood, Keating Summit, Sinnemahoning, Shaft No. 1, Pennsylvania.

Erie: Eriton, Wellsville and Addison, N. Y.

New York and Pennsylvania: Genesee

Buffalo, Rochester & Pittsburg: Juneau, Sykes

Coudersport & Port Allegany: Newfield Jct.

The embankments of the former Wellsville & Buffalo are visible for most of its length, and one frequently encounters them while motor-ing in Allegany, Cattaraugus and Erie Counties. One stretch near Crystal Lake (formerly known as Fish or Zero Lake) where there is now a overpass across the Buffalo, Rochester & Pittsburgh, (now B&O) is now a section of a New York State Highway. The former railroad station in Belmont, New York, was moved a short distance, and converted into a residence—the exterior lines were left unchanged. It is now occupied by Mr. William VanCampen, an attorney in Belmont; Mr. Van Campen is a descendent of Moses Van Campen, the first engineer who surveyed the entire section after the War of the Revolution. The former B&S agent at Belmont, Mr. A. R. Sherwood, is now the mayor, and owner of the Belmont Lumber Company with yards at Belmont and Bolivar.

Since any sort of publications on the Wellsville & Buffalo appear to be extremely rare, a list of the stations on a timetable dated July 23, 1916, is given. They were as follows: Buffalo, Blasdell, Hamburg, North Boston, *f* Patchin, Boston, *f* E. Concord, Springfield Jct. (branch to Spr.), Sardinia, Yorkshire, Arcade, Sandusky, Crystal Lake, *f* Pixley Summit, Centerville, *f* Hume, *f* Wesley, Rushford, *f* Caneadea, *f* Crawford, Belfast, *f* Transit Bridge, Belvidere, Belmont, Scio, Wellsville.

Connections with other roads were (1) all roads entering Buffalo at that point, (2) the Buffalo, Attica & Arcade at Arcade, (3) the Buffalo, Rochester & Pittsburgh at Crystal Lake, (4) the Pittsburg, Shawmut and Northern at Belvidere, (5) the Pennsylvania at Belfast, (6) the Erie and B&S at Wellsville. There were long waits for passengers at all the connecting points.

There was no Pullman service on the Buffalo & Susquehanna, but a combination passenger, buffet and parlor car was operated on the train between Galetton and Buffalo.

In the previous description of the construction of the road, there was no mention of the three switchbacks, which were one of the principal features. The first one, on the line near Keating Summit, was built by the Sinnemahoning Valley Railroad, in order that there might be a direct connection with the Buffalo, New York & Philadelphia Railway. The other switchbacks are on the western and eastern slopes of Hog Back Mountain, the maximum grades being 135 ft. per mile. Pusher

engines were not generally used, as the long leads on the switchbacks permitted the cutting of long trains into sections. When necessary, they were also used for meeting or passing points for passenger trains.

There was a bad flood in this region in July, 1942. The former B&S tracks between Sinnemahoning and Burrows, Pa. (44.5 mi.), and the branch line from Wharton to Austin, Pa. (9 mi.) were washed out. This portion of the line was abandoned with the approval of the Interstate Commerce Commission. Thus, the switchbacks are no longer in operation, and the road is in separate portions without direct physical connection.

Another peculiar fact of construction was the "Circus track" at Galeton; this was an almost complete circle, which joined the roads or trackage in all directions. It saved much switching. It was operated by a semaphore by trainmen at the west end of the passenger station where it crossed the main track.

There were 3 tunnels on the Buffalo & Susquehanna. Sabula Tunnel (1550.5 ft.) was located at Sabula, east of DuBois. Cottage Hill Tunnel (401.5 ft.) is just west of DuBois, and West Liberty Tunnel (644.9 ft.) is located just west of the highway crossing known as "B&S crossing" west of DuBois.

There were two proposed extensions to the Buffalo & Susquehanna, which were never carried beyond the paper stage. One was to build a new line from Austin to Mina, and use the Coudersport & Port Allegany Railroad to Gold, and then build from Gold to Hickox. Another (about 1900) was to tunnel from near Greco and come out at Hickox.

The Medix Run Railroad (11.49 mi.) was a branch from Medix Run to Dodgeville. It was operated by the Medix Run Lumber Co. prior to its sale to the Buffalo & Susquehanna.

It would be remarkable, indeed, if at some time or other upon a single tracked line with heavy traffic, often double-headed, there were no collisions. I have been fortunate in securing a photograph of an unscheduled meet that occurred at Genesee, Pa., on Sept. 11, 1911, in which No. 168,136 and No. 123,167 were involved. Such an accident is relatively uncommon upon any road.

I am indebted to Mr. Randolph Soransen of St. Marys, Pa., for a number of comments, and a narrative of certain natural and human characteristics that enter, in a perspective sense, into the history of the Buffalo & Susquehanna Railroad. Some of these are reproduced "in toto".

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In Mr. Soransen's opinion, the title of oldest engineer belongs to Mr. Henry E. Page, instead of to Mr. Darbyshire. His conclusion is based upon his familiarity with the engineers' roster, and the superintendent and train dispatcher seniority list, the Pine Creek Lodge of Brotherhood

of Locomotive Engineers, and an intimate personal acquaintance with him and his family at Austin. One son, John, became an M.D., but another, Charles, followed the railroad, being fireman and engineer in turn.

There was a strike in the Galeton shops during the regime of Mr. C. Peter Clark. Strike-breakers were imported, which adversely affected morale and the welfare of the railroad.

There appears to be a slight confusion, due to similarity of engine numbers, about the "freak" No. 101. This was a monster for those days, built by Baldwin, and either a 2-10-0 or 2-10-2, nearly 100 ft. in length, and in height and width would just make the standard clearances.\* Although it had 5 sets of flanged drivers, there was considerable experimentation at various times in trying out blind drivers at the ends or in the middle, on account of the high degree of curvature in different sections of the road; the results were not encouraging. It had been built for the express service of handling freight between Galeton and Corning, using the tracks of the Fall Brook Railway from Ansonia to Corning. After many complaints by the management of the latter, and threats of severance of traffic rights the engine was placed in storage. After that the service was accomplished by a small engine, usually No. 110. It was customary for engineer Aylesworth and conductor Simmons to be in charge of the train, although other trainmen who had passed the Fall Brook Railway tests and had been certified could be assigned to the run.

The B&S locomotives were all renumbered into the B&O classification, and are now scattered all over this system.

The Buffalo & Susquehanna had trackage rights between B&S Jct. (near Stanley) to Juneau Jct. (15.44 mi.) over the Buffalo, Rochester & Pittsburgh. The contract was dated Jan. 7, 1905, and was to run for 20 yrs. from July 1, 1906, and thereafter until terminated by 2 years' written notice given by either party to the other. These trackage rights were still in effect when both roads came under the jurisdiction of the Baltimore and Ohio in 1932 and are still in effect.

The line of the B&S, east of the above trackage, extending from B&S Jct. to East DuBois (5 mi.) was abandoned in 1944, with permission of the Interstate Commerce Commission. At the same time, trackage rights over the parallel BR&P line between B&S Jct. and DuBois were granted to the B&S "which trackage right will be exercised by the B&S only in the event the B&O should at any time in the future cease to operate the Buffalo & Susquehanna Railroad.

"In other words, the new arrangement allows the B&S to operate over tracks of the BR&P from Juneau through B&S Jct. to DuBois, Pa., and B&S access to DuBois is assured by this trackage privilege whether or not both roads are operated by the Baltimore and Ohio Railroad.

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\*About the same time Baldwin built a 2-10-2 for the Pittsburgh, Shawmut and Northern, which likewise proved to be too large for the existing tracks. (see Bulletin No. 64 p. 35)

"The abandonment of the B&S line between B&S Jct. and East DuBois was brought about by the need within a short time of extensive repairs to the West Liberty Tunnel in this line, and rather than undertake necessary rehabilitation of this *wet* tunnel as well as other repairs and maintenance work, it was concluded to be much less costly to abandon the line and to use the parallel double tracks of the BR&P."\*

A short biography of Mr. Randolph Soranson, who has supplied many of the details of the Buffalo & Susquehanna, the Pittsburg, Shawmut and Northern, and the Pittsburgh & Shawmut Railroads, may be of interest. His early years were spent near Wellsboro, Pa., from where the family moved to Westfield, Pa. in the late seventies. For about ten years he attended the public schools of this town, and took an intense interest in watching trains of the Fall Brook Railroad and the Addison and Northern Pennsylvania Railway, for which Westfield was the southern terminus for some years. During his later years at home he spent considerable time at the station, where he learned telegraphy and station work. After leaving high school he took up stenography and typewriting at his father's insistence. At the completion of this course, he became clerk and stenographer to Mr. Frank M. Baker, general superintendent of the A&P railroad, at Addison, New York. He performed odd duties from those of janitor to private secretary, telegraphing, bookkeeping, auditing freight and ticket reports, station work, and keeping track of repairs and shop records. As Mr. Baker was the receiver's agent for the Bradford, Eldred & Cuba Railroad (a narrow gauge line between Wellsville, N. Y., and Eldred, Pa.) they also had to take care of the auditing and executive work of that road. Mr. Soranson remarks that those were hectic days; they worked "from about 7:00 A. M. to 11:00 P. M. or later as necessity demanded" for a small stipend which was practically his board. The major recompense was a thorough and varied experience, with intense enthusiasm for railroading.

The year of the Johnstown Flood (1889) nearly every mile of track, culverts, siding, etc. in the Cowanesque-Mill Creek area was carried away; the same storm also swept away the high trestle north of Freeman's. The stockholders of the Addison & Northern Pennsylvania Railroad produced the money necessary to rehabilitate this section, so that later on, when an addition southward was projected, they received the proposition coolly, in spite of Mr. Baker's attempts to arouse their interest. Decreased traffic, strong competition and the necessity to cut expenses caused Mr. Baker to lose interest in this railroad, so he prevailed upon Senator Platt to secure his selection as Railroad Commissioner for the State of New York. He returned to his home in Owego, taking Mr. Soranson along as his secretary

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\*from letter of Mr. E. D. Davis of the B&O.



Meanwhile Mr. W. C. Park, an A&P roadmaster had received favorable notice from Mr. F. H. Goodyear, and been promised the position of trainmaster at Austin, Pa. Messrs. Park and Soranson had roomed together at Addison for a long time; when Mr. Goodyear called Mr. Park into his service, the latter offered Mr. Soranson the position of chief clerk — thus, he got in “on the ground floor” at the time big railroad events were happening in that part of the country. In addition to his work for Mr. Park, it was also proposed that he act as stenographer for the Messrs. Goodyear when on location. Thus he became well acquainted with their aims, methods of business, and development of their numerous projects.

Just before leaving Owego, Mr. Baker suggested to Mr. Soranson that at a favorable moment, he broach to Mr. Goodyear the subject of sale of the A&P property, which must either receive strong support or shortly go into receivership. “The opportunity came quicker than I expected. I was taking dication from Mr. Goodyear one evening in Austin a few weeks later, and he asked me regarding the local traffic along the A&P Ry. . . . .” and many other details. “I explained that Mr. Baker contemplated leaving the A&P RR. property on account of the promised railroad commissionership, and that he had suggested that Mr. Goodyear might consider it a good outlet for his line . . . . He appeared to be delighted by his information and said . . . that he would give the matter every consideration . . . .”

Many of the records including nearly all of Mr. Soranson's personal effects were destroyed in a fire at Austin about 1899; the offices were then moved to Galetton where a new office building was constructed where he remained for several years. Through the solicitation of a personal friend he entered the employment of the Pittsburg, Shawmut and Northern, in the traffic department and shortly afterward became private secretary to the general manager. He was removed from that position when that line was being probed and reorganized, and installed as head of the freight claim department, where he remained until 1910. Having some artistic ability, he designed the covers for the timetables during this period.

In 1910 he returned to the B&S as interchange and chief clerk at Arcade, N. Y., in connection with traffic between the B&S, Buffalo, Attica & Arcade and Pennsylvania railroads at that point. When the line (ended as Wellsville & Buffalo) was dismantled in 1917, he went to Buffalo, and assisted in closing the accounts of both corporations. At the request of the Pittsburg & Shawmut he then took a similar position at Kittanning where he remained until 1923; he had charge of the freight claim work during the “reign of the Federal Railroad Administration” reporting to Mr. H. C. Barlow of the Erie, to which the P&S had been allocated.

He then left the railroad, entering mercantile business at Bradford, Pa., handling automobiles, accessories and radios. He finally retired to St. Marys, Pa., where he now resides, being proprietor of a small store on Center Street.

Mr. Randolph Sorenson of St. Marys, Penna., a former employee of the Buffalo and Susquehanna, and of the BA&A, writes, "When the Buffalo & Susquehanna Ry. was building from Buffalo to Wellsville, pressure was brought to bring the then Buffalo, Arcade & Attica Railroad into their orbit as a feeder line; this was undoubtedly brought about by stock control or some like financial arrangement, with which I am not familiar.

(NOTE: The interrelation of the two roads is shown by a glance at the list of officers. In 1905, among the directors of the BA&A were Pres. F. H. Goodyear, Vice President C. W. Goodyear, A. C. Goodyear (Pres. in 1911), and Sect.-Treas. F. A. Lehr. At the same date (1905) F. H. Goodyear was chairman of the board and first vice-president, and C. W. Goodyear was second vice-president of the Buffalo and Susquehanna, while F. A. Lehr was the Sect.-Treas. They were also officers of the New Orleans Great Northern Railroad Co. F. H. being President, and C. W. the vice-president. The latter was a 190-mile standard gauge road, incorporated on Oct. 1, 1905, to run between Slidell, La., and Jackson, Miss. The purpose was to open up the area and secure the lumber traffic. The activities of the Goodyears, and their excellent management of the B&S are given in Bulletin No. 49, p. 33.)

"The employees of the B&S Ry. line at Arcade numbered at one time some 25 persons at this telegraphic agency, which was on a 24-hour basis, and included car inspectors, section hands, freight and transfer handlers. When their work prevailed in joint service for the two lines these employees, prior to the receivership, received checks from both the B&S Ry. and the BA&A RR; the checks were issued in Buffalo, and distributed semi-monthly by the B&S Ry. paymaster.

"Although the large powdered milk plant of the Merrille-Soule Co. was located on BA&A tracks, nearly all of their shipments, both carloads and L.c.L., as well as a majority of shipments from the Oak Knitting Co., consisting of woven women's garments in less than carload lots, as well as a majority of the inbound shipments, were handled for many years by the B&S Ry., either by switching or trucking.

"Shortly after the receivership of the B&S Ry., and about the time the railroad was purchased and reorganized as the Wellsville & Buffalo Railroad, the ties binding the BA&A were severed, though herculean efforts were being displayed at Arcade and elsewhere to keep them alive.

(NOTE: The BA&A went into receivership on Mar. 6, 1917, operations ceasing four days later. On May 4, 1917 the Arcade & Attica Railroad Corporation was incorporated to acquire this property, and began operations on June 1st. This railroad still operates, though passenger service has been discontinued.)

"The B&S Ry. had considerable trackage in its yards, and property consisting of a modern passenger and freight house with ample loading and unloading platforms; a large wye track with each leg holding from ten to fifteen cars, making direct rail connection with the BA&A RR. an ample coaling switch, a passing siding capable of holding thirty cars, large water tank, stock chute and pens. When the road was torn up, the connection running to Arcade Jct. with the Pennsylvania Railroad, and the wye and some other tracks were permitted to stand, whether by purchase or lease I am unable to state.

"Originally, before the advent of the B&S Ry., it is surmised that the BA&A RR had direct connection to the Pennsylvania Railroad at Arcade Jct., as there is an old abandoned railroad bed on the north bank of Cattaraugus Creek between the two points. After the B&S was built they used these tracks solely.

"The writer is greatly indebted to Mr. D. Grant Hodge, a local citizen, for many facts and dates shown in this article."

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#### ACKNOWLEDGMENTS

*The author takes pleasure in acknowledging the assistance of Messrs. M. J. Curran, E. D. Davis, W. F. Pond and U. V. Clark, all of the Baltimore and Ohio Railroad Co., and of Mr. Soranson of St. Marys, Pa.*

TABLE I

*Predecessors of B&S, with Construction by each*

NAME	INCORP. UNDER GENERAL LAWS OF PA.	REMARKS
1. Buffalo & Susquehanna Railroad Corp.	12-31-13	
2. Buffalo & Susquehanna Railroad Co. (of 1893)	9-25-93	Sold at judicial sale 12-5-13 after receivership begun 7-23-10. Reorganized 12-31-13
<i>Built by 2</i>		
Galeton to Perryville	1895-6 25.75	
Wharton to Bailey Run	1897 2.44	
Gaines Jet. to Gaines	1898 .62	
Hickox to Harmantown (abandoned 1902)	1898 5.23	
3. Buffalo & Susquehanna Railroad Co. (of 1891)	10-7-91	Consolidated with 4, 5, 6, 7 to form 2; 9-7-93
<i>Built by 3</i>		
Galeton to Cherry Springs	1891-3 13.84	
4 Cherry Springs Railroad Co. (Hull to 2 mi. from Cherry Springs)	1893 8.86	ditto
5. *Cross Fork Railroad Co.	1893 12.73	ditto
6. Susquehanna Railroad Co. (Costello to Hull)	1891-3 14.27	ditto
7. The Sinnemahoning Valley Railroad Co. Keating Summit to Costello	1885-6 11.85	ditto
Main line connection at KS	1887 .64	
8. Condersport and Wellaboro Railroad Co. Galeton to Ansonia	1892-3 13.12	Merged with 2, 9-12-94
9. State Line (S.L. to Perryville (1892-3)	1.61	ditto 11-2-95
10. **Susquehanna and New York Railroad Co.	6-14-98	ditto 3-30-01

TABLE I (cont.)

NAME	INCORP. UNDER GENERAL LAWS OF PA.	REMARKS
11. **Addison and Pennsylvania Railway Co. (of 1892)	8-16-92 (N. Y.) 8-30-92 (Pa.)	Property sold at judicial sale 4-22-98 in 2 parts; one part acquired by (10) 5-20-98 and the other by the Addison and Susquehanna Railroad Co.
12. **Addison and Pennsylvania Railway Co. (of 1887)	7-15-87 (N. Y.) 7-22-87 (Pa.)	Sold under the foreclosure 7-9-92; reorganized 9-28-92 as (11).
13. Addison and Northern Pennsylvania Railway Co. Addison to Gaines Sold 9.75 to A&SRR Co. 1898 (to Std. gauge in 1898)	6-19-82 (N. Y.) 7-13-82 (Pa.)	Sold under foreclosure 5-5-87; after receivership begun 4-12-80 and reorganized 8-1-87 as (12)
14. **Galeton and Eastern Railroad Co.	7-14-98	Merged with 2, 3-30-01
15. New York and North Pennsylvania Railroad Co. Gaines to Galeten Abandoned	5-8-83 1883 5.15 1901 4.94	Sold under foreclosure 5-19-98; reorganized 5-31-98 as (14).
16. Northern Susquehanna Railroad Co.	1-31-00	Merged with 2, 3-30-01
17. Sinnemahoning to near Bailey Run, 1900-1 Susquehanna & Southern Railroad Co. Sinnemahoning to Sykesville, 1902-5 DuBois Jet. to DuBois, .53	16.57 55.64 53	ditto 6-12-05
18. *Medix Run Railroad Co.	11.61	Sold to (17) at sheriff's sale 6-10-05
19. Southern DuBois Railroad Co. Juneau to Coveade,	1905-7 3.55	Merged with 2, 1-23-07
20. Plumville Railroad Co. Coveade to Sagamore,	1905-7 18.61	ditto 3-2-07

\*All construction now abandoned

\*\*Did no construction

The Potato Creek RR. was never a part of the E&amp;S.



NOVEMBER 1893

# DELAWARE, LACKAWANNA AND

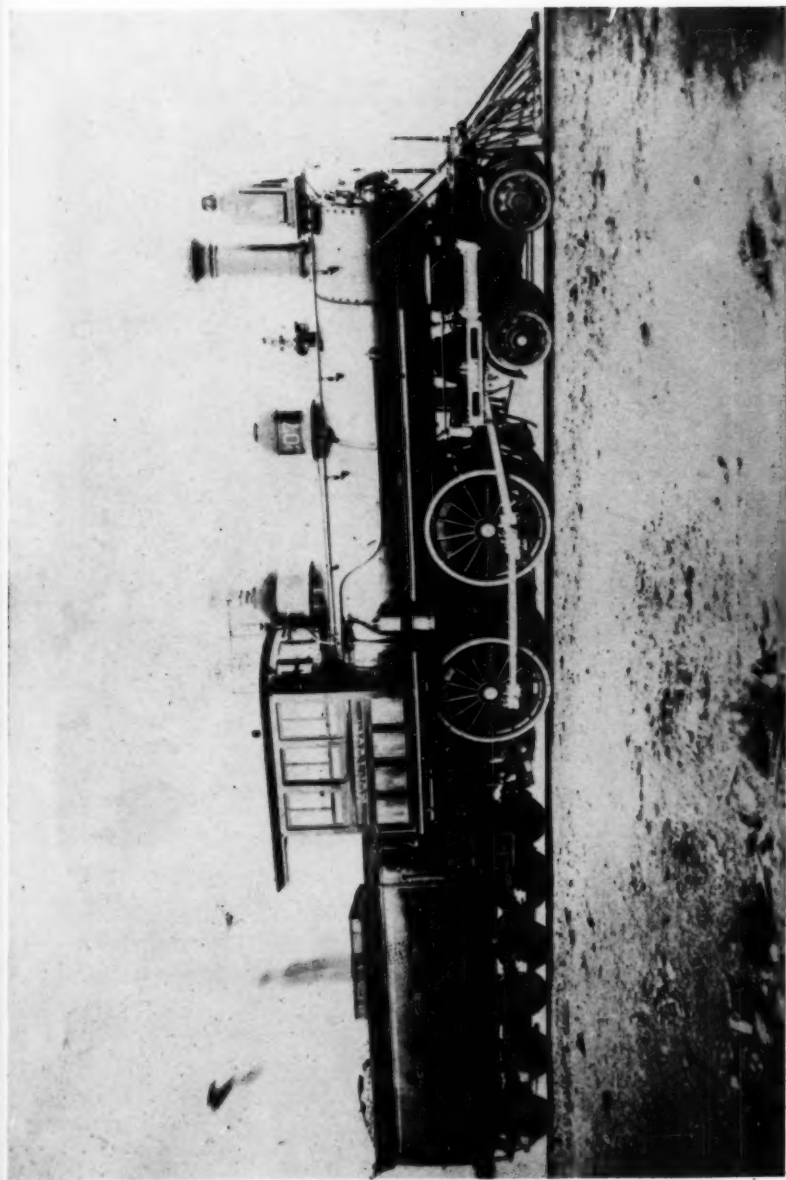
MAIN

Statement of Labor and Materials Used by us

No.	NAME	CLASS	MATERIALS										LABOR										TOTAL										
			COAL	IRON	STEEL	BRASS	COPPER	ZINC	ALUMINUM	LEAD	SILVER	GOLD	WOOD	PAINT	GLASS	PAPER	TEXTILE	FOOD	BEVERAGE	TOBACCO	OTHER												
1	COL. BRANTON	A 1	2000	112	9.40	156	25.00	218	8.44	78	11	1400	5	37	63	95	1000	4	14	20	1	4	100	1	100	1	100	1	100	1	100		
2	JOHN BROWN	A 2	2470	200	13.61	130	30.63	36	17	600	10	1000	20	30	65	100	4	74	71	11	10	1	100	1	100	1	100	1	100	1	100		
3	E. B. BROWN	A 1	1120	111	10.47	142	31.12	37	10	101	9	1000	12	61	27	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
4	W. B. BROWN	A 1	1200	230	23.93	76	75.02	22	10	20	30	1000	30	54	100	12	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100		
5	JOHN BROWN	A 1	1000	22	4.54	15	6.00	3	0	64	2	1000	320	72	120	1000	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
6	W. E. DODGE	A 1	1270	292	18.56	104	36.05	24	10	101	10	1000	13	73	30	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
7	W. F. DODGE	A 1	2014	178	33.53	124	20.20	20	27	75	10	1000	10	102	33	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
8	W. F. DODGE	A 1	1000	210	14.30	113	20.72	25	21	37	70	1000	4	20	14	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
9	W. F. DODGE	A 1	1000	156	20.84	157	20.60	35	23	16	51	1000	30	10	75	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
10	W. F. DODGE	A 1	1000	200	15.20	123	36.50	22	24	30	54	1000	34	10	75	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
11	W. F. DODGE	A 1	2070	214	13.41	101	20.41	15	13	10	100	0	23	91	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100		
12	W. F. DODGE	A 1	1000	100	17.00	135	10.00	27	17	20	32	1000	2	63	13	100	12	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
13	W. F. DODGE	A 1	1000	170	25.30	100	14.11	13	15	10	35	1000	10	101	31	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
14	W. F. DODGE	A 1	1000	200	18.15	120	37.50	32	23	17	54	1000	11	100	20	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
15	W. F. DODGE	A 1	1000	200	14.18	112	37.50	21	23	11	55	1000	11	100	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100
16	W. F. DODGE	A 1	1000	153	10.40	14	100.00	37	8	11	15	1000	2	75	65	1000	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100
17	W. F. DODGE	A 1	1070	70	21.00	30	37.60	9	4	11	30	1000	5	33	30	1000	65	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
18	W. F. DODGE	A 1	2000	12	61.00	52	30.00	13	1	63	17	1000	3	60	15	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
19	W. F. DODGE	A 1	1500	156	20.84	143	30.00	10	13	17	20	1000	0	65	14	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
20	W. F. DODGE	A 1	1000	162	20.82	104	32.50	10	10	13	20	1000	10	20	17	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
21	W. F. DODGE	A 1	2000	116	21.82	60	10.00	12	0	100	23	1000	23	25	7	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
22	W. F. DODGE	A 1	1000	14	21.82	0	17.50	2	0	0	20	1000	1	31	42	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
23	W. F. DODGE	A 1	2000	127	21.26	71	30.02	12	7	72	20	1000	10	100	60	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
24	W. F. DODGE	A 1	1910	102	18.92	33	30.22	12	0	11	37	1000	0	100	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100
25	W. F. DODGE	A 1	1910	100	17.02	72	10.00	14	0	100	30	1000	8	72	70	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
26	W. F. DODGE	A 1	1000	230	21.13	116	15.30	21	13	72	27	1000	9	100	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100
27	W. F. DODGE	A 1	2000	100	20.00	52	10.02	13	0	100	24	1000	5	100	22	1000	10	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
28	W. F. DODGE	A 1	2000	129	20.41	60	30.53	12	7	65	20	1000	11	100	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100
29	W. F. DODGE	A 1	2000	112	21.85	91	33.23	21	10	100	32	1000	10	102	54	1000	30	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
30	W. F. DODGE	A 1	2000	200	12.50	82	31.70	20	10	102	12	1000	5	15	10	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
31	W. F. DODGE	A 1	1000	150	15.31	53	100.00	10	0	64	16	1000	2	100	15	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
32	W. F. DODGE	A 1	1017	174	31.13	142	20.14	21	13	13	24	1000	14	20	27	1000	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
33	W. F. DODGE	A 1	2000	120	17.20	65	32.60	13	7	10	30	1000	0	101	20	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
34	W. F. DODGE	A 1	1000	165	23.33	100	35.32	16	10	70	27	1000	10	101	37	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
35	W. F. DODGE	A 1	2000	50	14.44	50	30.00	12	4	10	10	1000	2	22	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100
36	W. F. DODGE	A 1	2000	100	15.00	80	30.11	21	10	23	10	1000	11	100	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100
37	W. F. DODGE	A 1	2000	173	13.78	78	32.65	19	9	105	30	1000	15	54	54	1000	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
38	W. F. DODGE	A 1	1000	202	22.65	132	35.53	23	15	70	20	1000	2	13	15	1000	2	101	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
39	W. F. DODGE	A 1	2000	102	23.15	60	34.70	12	7	12	30	1000	337	102	10	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
40	W. F. DODGE	A 1	1070	165	23.15	125	30.00	30	12	10	34	1000	31	20	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100
41	W. F. DODGE	A 1	2170	101	20.20	61	35.52	25	0	100	70	1000	20	15	1	1000	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
42	W. F. DODGE	A 1	1310	170	20.84	104	33.02	15	10	11	31	1000	20	100	70	1000	110	1	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100
43	W. F. DODGE	A 1	2000	100	23.85	80	32.30	11	7	102	30	1000	0	100	15	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
44	W. F. DODGE	A 1	1000	100	21.00	130	33.31	34	13	102	20	1000	10	107	22	1000	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100
45	W. F. DODGE	A 1	2100	172	15.45	60	34.90	15	0	105	34	1000	201	102	1	1000	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	
46	W. F. DODGE	A 1	1200	200	10.00	100	30.00	12	10	100	30	1000	15	60	100	0	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100
47	W. F. DODGE	A 1	1000	100	20.00	100	30.00	12	10	100	30	1000	15	60	100	0	100	1	100	1	100	1	100	1	100	1	100	1					



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D. L. & W. "Montour" No. 207, Kingston, Pa., Shops, 1892.

Engine "Montour", No. 207, built at the Kingston, Pa., shops, February 9th, 1892, by Charles Graham, M. M., to replace an earlier engine of the same name. In 1899, renamed to No. 480, and classified 9C. On March 3rd, 1909, the "Montour" was sold to the Gulf, Texas & Western R. R., one of whose founders was Mr. Joseph Jernyn, referred to in Capt. Robinson's account of the Delaware & N. York R. R. — Dia. Driver Centers 60" — Weight, O. D. 70,000 — Weight, Total 98,000 — Fuel Lamp anthracite

Texas & western N. R., one of whose founders was Mr. Joseph Jermyn, referred to in Capt. Robinson's account of the Delaware & Northern R. R.

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later converted to 4-6-0's) and the Winans Camels. Class 2 is mostly 4-4-0's and some 4-6-0's. Class 3 engines are 0-6-0's, most of which remained as such, probably for switching service. Class 4 included the road's first two engines, "Pioneer" and "Spitfire", both 0-4-0's and out of service, and three 6-driver engines, which were among the newest power on the road. The question of age or condition does not seem to enter into the class designation. Neither the 1854 nor the 1855 rosters list any class 3 engines, and give no hint as to the differences between the three classes, 1, 2 and 4.

By 1883, the Lackawanna System had acquired nearly all of its present mileage, but its component lines still operated as more or less independent units, especially in regard to their respective motive power.

As early as 1864, the Lackawanna & Bloomsburg R. R., later the Bloomsburg Division, issued a monthly statement of cost of locomotive operation, showing cost of such items as fuel, oil and waste. These Performance Sheets, locally called "oil sheets", were gradually enlarged to include other pertinent information, such as name of builder, name of engineer, principal dimensions, weights, etc. However, there was no classification shown. The Performance Sheets of the Bloomsburg Division were probably issued until 1886, in which year the engines of that division were assigned numbers 201 through 234, in the Main Line numbering system. They were renumbered accordingly and were reported on the Main Line Performance Sheets, until about 1891, after which they were no longer included. The Main Line sheets, were evidently discontinued in the early '90's.

Similar monthly reports were issued by the Buffalo Division, the Utica Division and the Main Line, but by no other divisions, as far as is known at this time.

It is on the Performance Sheets of the Buffalo Division and the Main Line that the next class designation occurs. On the Buffalo Division Sheet, dated June 30th, 1888, appears the following summary of engines:-

### *Classification of Locomotives*

	CYLINDERS			DRIVERS			WEIGHTS	
	CLASS	DIA.	STR.	No.	DIA.	CTRS.	ON DRIVERS	ON TRUCK
12 Passenger	A1	19	24	4	62	$\frac{5}{8}$	65,000	24,700
7 Passenger	A2	19	24	4	62	$\frac{7}{16}$	71,300	21,500
3 Passenger	A3	19	24	4	56	$\frac{7}{16}$	71,300	21,500
52 Moguls	B1	18	24	6	50	$\frac{3}{4}$	81,200	11,800
8 Moguls	B2	19	24	6	50	$\frac{3}{4}$	84,000	14,000
3 Mogul culm burners	B3	18	24	6	50	$\frac{3}{4}$	93,600	15,400
3 Consolidations	C1	20	24	8	45			
4 Tank Locos.	D1	17	22	6	41		74,400	11,100
3 Shifting	D2	17	22	6	41		76,000	No truck

N. B. The class marks in EXTRA HEAVY TYPE denote engines built for burning Bituminous coal. (Class marks are shown after road numbers)

The following summary is taken in part from a Main Line Sheet, for November, 1893, the last one available.

### *Classification of (211) Engines*

	CYLINDERS			DRIVERS		ENGINE
	CLASS	DIA.	STR.	No.	DIA.	TRUCK WHEELS
6 Passenger	A1	18	24	4	62	4
1 Passenger	A2	18	22	4	62	4
2 Passenger	A3	17	24	4	56	4
17 Passenger	A4	19	24	4	62	4
1 Passenger	A5	19	24	4	56	4
1 Passenger	A6	20	24	6	56	4
1 Passenger compound	A7	14&24	x24	6	56	4
<hr/>						
29						
35 Moguls	B1	18	24	6	51	2
36 Moguls	B2	19	24	6	51	2
4 Moguls	B3	19	24	6	56	2
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75						
58 10-wheel engines	C1	18	24	6	51	4
1 10-wheel engine	C2	18	24	6	45	4
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59						
29 Consolidations	D1	20	24	8	45	2
1 Consolidation	D2	19	24	8	43	2
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30						
17 Shifting	E1	17	22	6	41	0
1 Shifting	E2	15	22	4	41	0
<hr/>						
18						

N. B. All engines burn Anthracite Coal. The class marks in EXTRA HEAVY TYPE denote engines that have the Wotten Boiler for burning fine coal. The class marked with a \* denotes engines with large plain Fire Box for burning fine coal.

N. B. The truing up of tires when first put on is to be considered the first turning.

(In December, 1890, the "A" class went to A-9, and Class A-7 covered a 4-4-0, with 16" x 24" cylinders and 55½" driving wheels.)

Comparision of these two summaries shows the variance in the use of the class "letter" on the two divisions. This resulted in a change of class, when a locomotive was transferred from one division to another, a very frequent occurrence. On the Main Line, class A reserved for passenger engines, which, at one time, were all of the 4-4-0 type. In 1893,

however, that class included two ten-wheelers, probably because they were in passenger service, instead of placing them in Class C. which covered ten-wheelers, all in freight service.

It will also be noted that, at this early date, the measurement of driving wheels is given as the diameter of the wheel centers, which is quite contrary to usual practice and was continued by the D. L. & W. until well into the 1900's. This has been the cause of much confusion in presenting records of D. L. & W. engines, but is not without merit, for the diameter of the centers is constant, whereas the outside diameter is distinctly variable.

Where the diameter of the wheel center is given, there is a question as to the allowance to be made for tires. The D. L. & W. performance sheets indicate that, during the 1880's and 1890's, *new* tires varied in thickness from  $2\frac{7}{8}$ " to  $3\frac{1}{2}$ ", from which it would seem that the "tire allowance" should vary from  $5\frac{3}{4}$ " to 7", depending on the measurement of the new tire. It is also reasonable to suppose that the thickness of new tires applied in the earlier days of the locomotive were less than those quoted above.

It is further recorded on the tire records that tires which had been turned six times had thicknesses of  $1\frac{3}{16}$ " to  $1\frac{15}{16}$ ". (In my own records of Lackawanna motive power, I have tried to be consistent in using a 6" tire allowance on engines built prior to 1899, which seems to be an average, and 7" for those built after that date.) The D. L. & W. has since abandoned the practice of quoting driving wheel centers measurement, in favor of the overall dimension. Neither method is entirely satisfactory.

At the time of the general renumbering, May 15th, 1899 there were approximately 600 locomotives on the Lackawanna System, and, since most of the divisions had, at one time, designed or constructed its own motive power, there was a variegated assortment of locomotives to consider in devising a classification system, which became effective at the time of the number change.

The system, as adopted, assigned a number, instead of a letter, for each class and, although there is no limit to the numbers which might have been used, it did not prove to be comprehensive enough to meet conditions which arose in the years immediately following. Neither did it possess the flexibility, or adaptability, of other systems.

Some consideration was given to wheel arrangement to the extent that the newer engines of the 2-6-0, 2-8-0, 4-4-0 and 4-6-0 types were segregated and assigned groups of road numbers. The basis for initial class distinction, however, was cylinder dimensions, and the locomotives were grouped with regard to that detail and driving wheel diameter. To each of these groups were assigned road numbers, and the engines of each group were numbered chronologically, the newest engine being given the lowest number of its particular group. The age of the locomotive

tive was based upon the age of its boiler, thus an engine built in 1880 and given a new boiler in 1898, would bear a lower number in its class group than a new engine built in 1897.

Of the 600 or more engines involved over 200 were similar to the extent that they had 18" x 24" cylinders and 50" (i. e., 50" to 51") driving wheel centers. These engines were all moguls and ten-wheelers. Many were equipped with wide fireboxes, for burning fine anthracite coal, others with narrow fireboxes for lump anthracite or soft coal. They were all assigned to Class 6 and were numbered without consideration as to type of firebox or wheel arrangement, but in the order of age as described above.

Class 1 covered the varieties generally listed as miscellaneous, and included 0-4-0, 0-6-0, 2-6-0 and 4-4-0 types. The cylinder diameters of this group included 15", 16", and 18". The cylinder "groups" were as follows:— 15" dia., No. 1; 16" dia., Nos. 2 to 5; 17" dia., Nos. 6 to 61; 18" dia., Nos. 62 to 68, all numbers inclusive.

Classes 2, 3 and 4 (except 3B and 4D) and classes 8, 9, 11, 19, 20 and 21 were composed of 4-4-0's. Classes 17 and 18 were consolidations. All others were six driver engines including moguls, ten-wheelers and one Prairie type. The observation engines were not classified. The engines of the Bangor & Portland R. R. and the Erie & Central New York R. R., acquired after the classification was adopted, were never classified.

One inconsistency seems to have been in placing in Class 1, a number of engines sufficiently alike to warrant a separate class designation, (for example, the numerous engines of the 0-6-0 type, having 17" x 22" cylinders and 41" driving wheel centers, and of the same type, having 17" x 24" cylinders and 44" wheel centers.) whereas individual class numbers were assigned in a number of cases to engines of which kind there was but one.

In the early 1900's, shortly after the new numbering and classification schedules had been put into effect, the entire scheme of chronological number assignment and class grouping was disrupted by frequent renumbering. Of the locomotives under consideration, 109 were renumbered at least once, and 6 were renumbered no less than three times. Such changes were made to make place for new locomotives in a given block of road numbers, and, from a study of this procedure, one might readily suppose that the M. P. Department knew of no numbers higher than 999. A conspicuous case in Class 1, where engines were shuffled about yearly to make room for the new 1A class engines, was that of No. 62. This engine which had been changed from No. 70, M. & E. Div., in 1899, was changed to No. 44, in 1902; to No. 29, in 1905; to No. 179, in 1908; and to No. 7, in 1914, the last renumbering because of change of type from 2-6-0 to 0-6-0.

Road Nos. 483 to 493, which were open numbers in 1899, were twice filled, once in 1904-5, and in 1910-11, in order to make room for



new engines in the 900 series. There were also one or two instances in which a group of engines were renumbered, the new and old numbers bearing no respective relation to each other, as might be reasonably expected.

The details of the 1899 classification are shown herewith.

### *Classification of Locomotives*

CLASS	DRIVERS No. DIA.*		SIZE CYLINDERS	NUMBERS FROM TO		No. IN CLASS.
1	4/6	Var.	See**	1	68	66
Obs.				98	99	2
2	4	56	16 x 22	101	103	3
2A	4	56	16 x 24	104	107	4
2B	4	57	15 x 22	108	109	2
3	4	57 $\frac{3}{8}$	17 x 22	110	118	9
3A	4	50 $\frac{3}{4}$	17 x 22		119	1
3B	6	50	17 x 22	120	121	2
4	4	57 $\frac{3}{8}$	17 x 24	125	140	16
4A	4	56 etc	17 x 24	142	145	4
4B	4	62	17 x 24	146	149	4
4C	4	50 $\frac{3}{4}$	17 x 24		150	1
4D	6	44	17 x 24		122	1
4E	4	54	17 x 24		123	1
5	6	44 etc	18 x 24	160	165	6
5A	6	45	18 x 24	168	169	2
6	6	50 etc	18 x 24	201	406	202
6A	6	56 $\frac{3}{8}$	18 x 24	408	409	2
6B	6	48	18 x 24		411	1
6C	6	51	18 x 24		413	1
7	6	48	18 x 22	415	416	2
8	4	57 $\frac{3}{8}$	18 x 22	418	419	2
8A	4	62 $\frac{3}{8}$	18 x 22		420	1
9	4	56 etc	18 x 24	425	432	8
9A	4	57 $\frac{3}{8}$	18 x 24	435	449	15
9B	4	62 etc	18 x 24	455	475	18
9C	4	60	18 x 24		480	1
10	6	45	19 x 24	501	513	13
10A	6	56 etc	19 x 24	515	521	7
10B	6	51	19 x 24	525	526	2
11	4	57 $\frac{3}{8}$	19 x 24	530	540	11
12	6	50 $\frac{3}{4}$	19 x 24	601	677	77
13	6	50 $\frac{3}{4}$	19 x 26	685	686	2
14	6	56 etc	20 x 24	690	693	4
14A	6	62 $\frac{3}{8}$	20 x 24		695	1
15	6	62 $\frac{3}{8}$	20 x 26		697	1
16	6	56 $\frac{3}{8}$	21 & 30 x 26		699	1
17	8	45	20 x 24	701	735	35
17A	8	44	20 x 24	740	741	2

### Classification of Locomotives (Cont.)

CLASS	DRIVERS		SIZE	NUMBERS		No. IN CLASS
	No.	DIA.*	CYLINDERS	FROM	TO	
18	8	45	19 x 24		745	1
19	4	62 etc	19 x 24	901	960	60
19A	4	66	19 x 24	965	968	4
20	4	56 $\frac{3}{8}$	19 x 24		969	1
21	4	62	20 x 26	971	972	2
						601

\*Diameter driving wheel CENTERS.

\*\*15" diameter No. 1.

16" diameter No. 2 to 5.

17" diameter Nos. 6 to 61

18" diameter Nos. 62 to 68

To the original 43 classes and sub-divisions thereof were eventually added 20 others, before this classification was abandoned. The additional classes are shown herewith.

### Classes Subsequently Added To The 1899 Schedule.

CLASS	TYPE	D. D.		CYLINDERS			REMARKS	FIRST USED
		CTRS.	DIA.	STROKE	FUEL			
1A	0-6-0	44	**	19	24	Culm		1901
1B*	0-6-0	44		19	24	Soft		1905
1C	0-8-0	50		22	28	Culm		1906
1D	0-8-0	50		22	28	Soft		1909
1E	0-8-0	50		27	30	Soft		1910
10C	2-6-0	56		20 $\frac{1}{2}$	26	Soft		1903
10D	2-6-0	56		20 $\frac{1}{2}$	26	Culm		1903
10E	2-6-0	50		21	26	Soft		1906
17B	2-8-0	50		21	26	Soft		1901
17C	2-8-0	50		21	26	Culm		1901
19B	4-4-0	62		20	26	Culm		1901
22A	2-8-0	56 $\frac{3}{4}$	**	22	30	Culm (No. 854)		1899
23	4-8-0	48		20	32	Culm		1899
23A	2-8-0	48		20 $\frac{1}{2}$	32	Culm		1900
24	4-6-0	62 $\frac{3}{8}$		20	28	Culm (From Class 24B, 1907)		1907
24A	4-6-0	62		22 $\frac{1}{2}$	26	Culm		1905
24B	4-6-0					(To Class 24, 1907)		1900
24B	4-6-0	62		22 $\frac{1}{2}$	26	Culm		1907
24C	4-6-0	66		22 $\frac{1}{2}$	26	Culm (From Class 24E, 1908)		1908
24E	4-6-0					(To Class 24C, 1908)		1907

In fuel column, engines burning culm (fine anthracite) have center cabs.

\*Until October 1905, were classed 1A.

\*\*From 1905 on, this engine is shown with 50" driving wheel centers, and, from October, 1909, is classed 23A.

Beginning in October, 1905, engines 525 and 526, originally classed 10B, are shown as Class 10A, which is evidently an error, as 10A engines had 56  $\frac{3}{4}$ " drivers, and 10B had 51" drivers and were never changed to 56  $\frac{3}{4}$ ".

In June, 1912, the class designation was dropped from the company rosters, and the wheel arrangement was substituted.

One minor oddity of the D. L. & W. in numbering its locomotives is that, although there were several engines bearing the number "100" and one numbered "200" prior to 1899, there has been none numbered on the even hundred (100, 200, etc.) since 1899, when the present number system went into effect.

About 1910, the inadequacy of the existing classification method was evident and a new system, more in conformity with present day systems, more flexible and hence better suited to the constantly changing conditions of locomotive design, was adopted. The basis for that system and a description of its application is shown herewith, as outlined in the company locomotive classification book.

**"Class:** — This is determined entirely by the wheel arrangement and is designated by a capital letter, as per schedule on next page.  
(No. B)

**Sub-class:** — A sub-class is indicated by a numeral after the class initial, as A-1 or B-3, and covers an essential difference in the class, as age, builder, weight, difference in essential dimensions, etc.

**Variation from sub-class:** — This is indicated by the further addition of a letter in modified italics. Each symbol of class, sub class and variation being separated by a hyphen, as G-15-a. This variation is intended to cover less important differences in the same sub-class, yet still worthy of record, such as valve motion, engine truck, size of wheels, superheater, style of frame, etc., in fact, variations which do not affect the fundamental dimensions. This letter may be introduced at the time the engine is built, to distinguish one or more on which some detail differs, or may be added at any time during the life of an engine.

The essential difference between a sub-class and a variation therefrom is that, while class and sub-class symbols once given do not change, the letter signifying a variation may change many times."

The schedule on Page B, referred to above, assigns class letters to wheel arrangements in the following manner:—

<u>Type</u>	<u>Class</u>
0-4-0	A
0-6-0	B
0-8-0	C
0-10-0	D

<u>Type</u>	<u>Class</u>
2-6-0	E
2-8-0	F
4-4-0	G
4-6-0	H
4-8-0	J
2-6-2	K
2-8-2	L
4-6-2	N
2-2-4 (Obs'n)	Z

and to these the following were subsequently added:—

4-8-2	P
4-8-4	Q
4-6-4	M

The locomotive diagrams in the company classification book show the outside diameter of driving wheels, although the company roster continued to give the diameter of the wheel centers for a number of years.

Although the standard driving wheel tire, used by the Lackawanna R. R. at this time, measures  $3\frac{1}{2}$ " in thickness, the road has equipped a number of engines with tires 4" thick, in order to obtain more service mileage between tire turnings.

The fine distinction made between locomotives, as required by the adoption of the foregoing system, resulted in an almost infinite number of classes and sub-classes. Apparently the upkeep of such a system was not justified for, in 1938, the classification of locomotives was abandoned and the road reverted to the practice of identifying its engines by road number series, by which means nearly everyone interested in D. L. & W. motive power has known them since the renumbering of May 15th, 1899.

# The Milford, Matamoras & New York Railroad

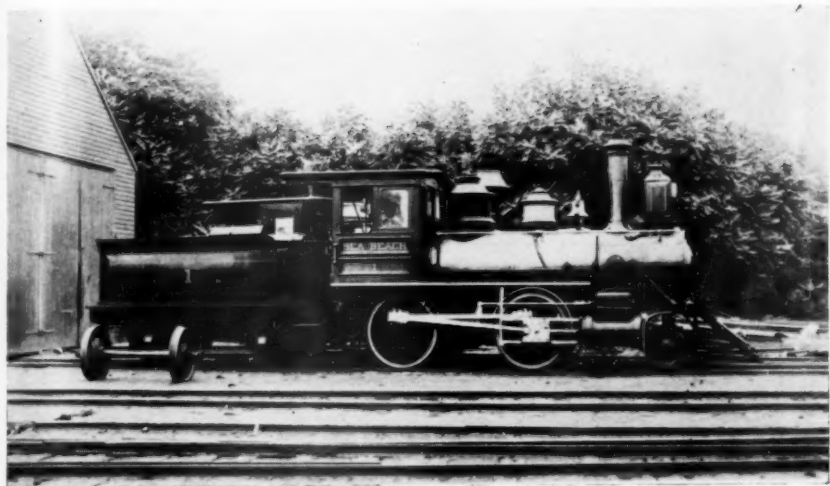
By G. M. BEST

To borrow the words of historian Edward H. Mott, this story of one of the shortest of short lines is really the "story of a little railroad and a big bridge."

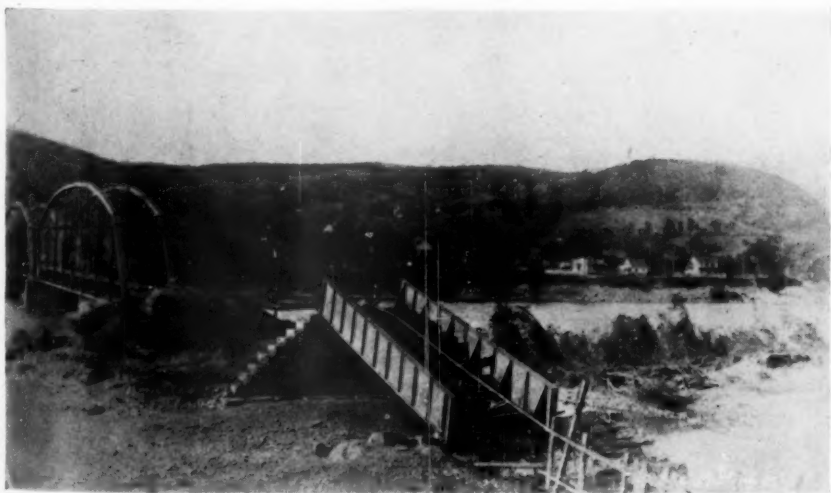
It all began when the New York & Erie Railroad, building westward in the 1840s, wished to change its projected route for a distance of three miles in the State of Pennsylvania, opposite the villages of Delaware and Port Jervis. The original route was surveyed to cross the Delaware River at the west end of the town of Delaware, which in those days was that part of the present City of Port Jervis on the flat lands near the river. The railroad was to enter Pennsylvania in the village of Matamoras, directly across from Delaware, and to proceed westward in Pennsylvania along the south bank of the river until after it had reached and crossed the Delaware & Hudson Canal at Lackawaxen. There was not enough room on the north bank, in New York State, for both a canal and a railroad, and as the canal was there first, it was deemed the most important, and the railroad had to find space elsewhere. To enter Pennsylvania at all, a special act of the State Legislature was required, following a long and costly battle with people opposed to permitting a New York State railroad to enter Pennsylvania.

But when the New York & Erie reached Port Jervis on January 7, 1848, the engineers had already discovered that the cost of building the line for the first three miles west of Matamoras would be enormous, due to a formation of steep walls of rock requiring a large amount of blasting before a roadbed could be constructed. By continuing the line on the New York side for three miles, and crossing both the river and the D & H canal at a point known as Mill Rift, this rock wall could be avoided, and the Company therefore petitioned the Pennsylvania Legislature for permission to cross the river at Mill Rift instead of Matamoras.

However, eight miles south of Matamoras was the village of Milford, county seat of Pike County, Pa., and when the New York & Erie plans to bridge the Delaware at Matamoras were announced, and legislative permission granted, citizens of Milford made immediate plans to build a connecting railroad slightly more than seven miles long. A railroad known as the Milford & Matamoras Railroad Co. was therefore chartered in 1848, and plans for constructing the road were going forward when



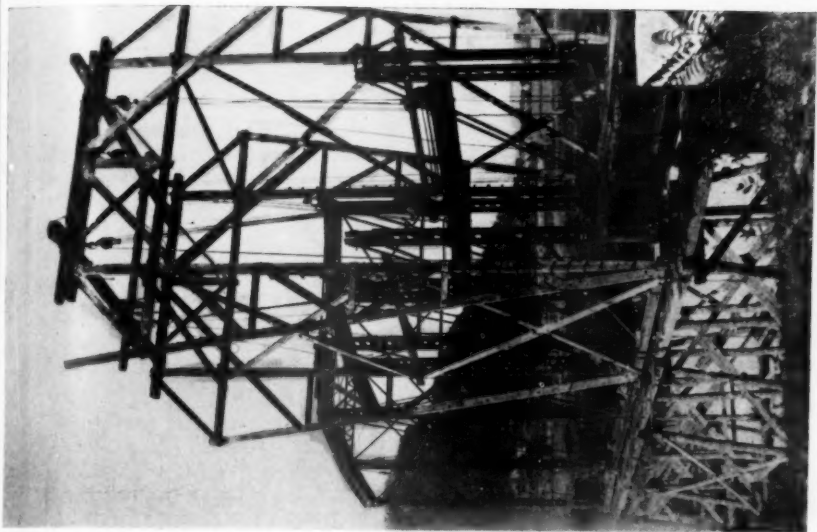
*Courtesy — Smith Collection*  
 N. Y. & Sea Beach No. 1    Bay Ridge, L. I. 8-24-1886



After the first 1904 flood.    The M. M. & N. Y. Bridge from the Port Jervis side.



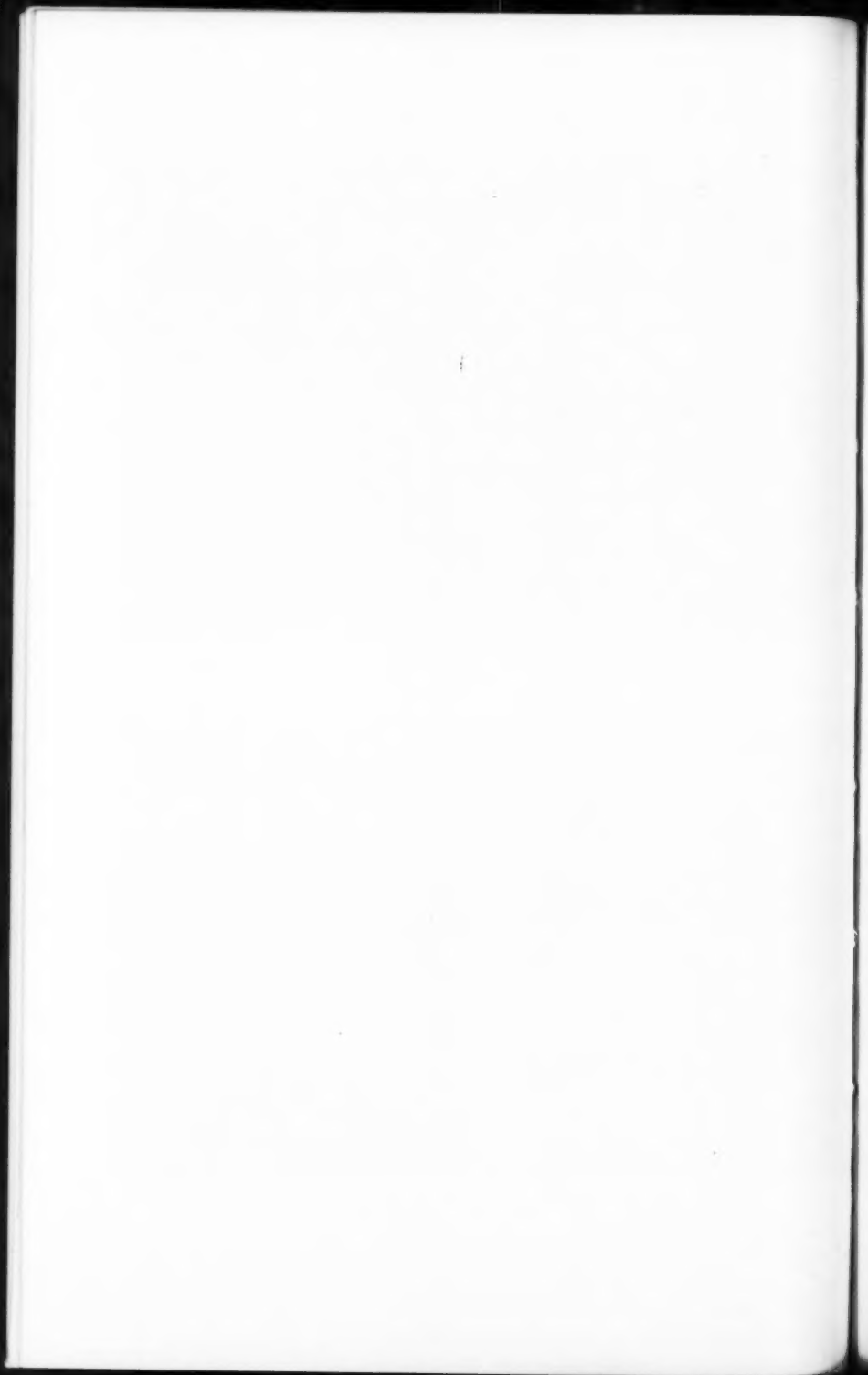




Building the M. M. & N. Y. Bridge Matamoras, Pa., 1898.



M. M. & N. Y. Bridge from Pennsylvania side.



the Erie petitioned the State for a change in the river crossing. This left the Milford & Matamoras without a connection with the NY&E unless they built a bridge across the Delaware on their own account, and the cost of this bridge was deemed so great that the railroad could not be built if the Milford promoters had to pay for the bridge.

Surprising though it may seem, the political pressure that Milford citizens were able to bring to bear on the legislators was so great that the New York & Erie were forced to compromise in order to obtain permission to change their river crossing, and they agreed to build a combination wagon and railroad bridge across the river at a site suitable to both groups, to maintain the bridge forever, and to lay a track from the Port Jervis station to the other end of the bridge in Matamoras at such time as the Milford & Matamoras required a connection. This seem like a high price for the New York & Erie to have paid, but it saved then three miles of the most expensive sort of railroad construction, and the possible loss of their charter due to failure to complete the railroad within a certain time limit.

But, having effected the change in route, crossed the Delaware at Mill Rift, and being occupied with construction problems far west of Port Jervis, The New York & Erie promptly forgot its obligation to build a bridge at Port Jervis, and let the deadline of October 1852 slip by without even starting construction on the bridge. Tired of waiting, Pike County citizens protested to the legislature, and under threats to enforce severe penalties if there was any further stalling, the NY&E built the bridge, completing it in 1854 at a cost of \$80,000. This bridge was built on stone piers, was entirely of wood, and very little of a descriptive nature remains to tell us of its design. The Milford & Matamoras Railroad was revived upon completion of the bridge and was organized in January 1854, but by the time the bridge was opened for traffic, with a fine turnpike for wagons leading from the bridge to Milford, the urge for the railroad subsided. At least, no money was raised for its construction, and it remained asleep for nearly twenty years.

In 1868, however, plans were announced for a railroad from Easton, Pa. to Port Jervis, and a charter was granted to the Lehigh & Eastern RR Co. in 1869 to build such a railroad. This stirred the Milford & Matamoras into life again, and on the eve of the expiration of their charter, they reorganized, let contracts for the grading, and actually began work on the right of way in the early spring of 1870.

But a high wind in March, 1870, blew the bridge into the river, and since it was not their worry, the Milford & Matamoras officials notified the Erie management that their bridge was destroyed, and to please replace it without delay, or suffer the penalties provided for in the legislative acts of 1848. But the Erie was then controlled by Jay Gould, who pulled a neat trick out of the well known bag, and unknown to Milford residents, sold the bridge to a mythical company known as the LaMonte Mining and Railroad Company. By using influence, and greasing the palms of key legislators, the Pennsylvania legislature passed an act permitting the LaMonte Company to buy the bridge. This aroused Pike County to such a

high pitch that the Legislature, taking alarm at the situation, passed another act appropriating the annual \$10,000 payment made by the Erie to the State for the right to pass through it, and to pay this amount to the Milford & Matamoras RR each year thus assuring it of ample funds to operate, build their own bridge, and in effect, guaranteeing such bonds as the railroad might wish to issue. These bonds were promptly issued, and grading work continued, although in spite of this seemingly perfect arrangement for financing a 7 mile short line, some of the Milford citizens petitioned the Legislature to force the Erie to build the bridge anyway.

Pending hearing of this petition, the mysterious LaMonte Company sold all its rights to the Barrett Bridge Company, which company proceeded to build a wagon bridge across the Delaware a mile below the site of the old Erie bridge. This bridge being assured, the State withdrew the case against the Erie on the grounds that the people were satisfied. This could hardly satisfy the Milford & Matamoras railroad, as the bridge was of light cable suspension type, and could not carry the weight of a locomotive or cars.

So the dissatisfied parties laid the affairs of the Milford & Matamoras directly before Governor Geary, and instead of intervening in their behalf as they expected, he demanded by special message the repeal of the act appropriating the Erie bonus to the Milford railroad, and this act was promptly repealed by the obedient legislature. This knocked all the underpinning from the railroad, the bonds became worthless overnight, there was no railroad bridge, and most of the stockholders, rightfully feeling that they had been sold out by one of their own number, withdrew from the project and the railroad died then and there. Had some of the stockholders possessed sufficient energy, there is no doubt in the minds of those familiar with the Erie's agreement, that the Erie could have been forced to replace the old bridge and to build a connecting track across it. But they didn't, and as in so many other instances, Jay Gould had his day.

The grading remained as a monument to the idea, however, with several stone culverts, cuts through the hillsides, and a number of small, curved fills visible even today, over 75 years later. This roadbed proved expensive to the taxpayers of the State of Pennsylvania in due time, for Col. Moorehead, the contractor, came forward years after the collapse of the Milford & Matamoras and presented a claim for nearly \$70,000, claiming that the State in virtually guaranteeing the bonds of the railroad company had given the bonds their value, and he had accepted bonds in full payment for grading seven miles of line. The state, in annulling its implied guarantee had destroyed the value of the bonds, and left him the loser. The claim was referred to a commission, and in due time it was allowed in full and paid.

In subsequent years, various railroads through the Delaware Valley from points in the anthracite coal regions were proposed, including an electric railroad from Stroudsburg to Port Jervis. One actually was partly built, this line known originally as the Delaware Valley, Lehigh

& Hudson, later shortened to Delaware Valley RR, starting at East Stroudsburg, Pa., and reaching the village of Bushkill, 12 miles up the river, before the funds for construction ran out

But entirely separate from any other project, a group of New York financiers chartered a railroad known as the Milford, Matamoras & New York RR Co., on June 9, 1897, with C. W. Clarke of Brooklyn, N. Y., as President, and W. V. Hilliard of Milford, Pa. as General Manager. When this Company applied to the State of New York for the right to build a one mile line from the proposed bridge across the Delaware, to a connection with the Erie station at Port Jervis, the Erie protested and forced the formation of another company known as the Matamoras & New York RR Co. This company, and the one in Pennsylvania were each capitalized for \$50,000, and this stock must have been sold to the unsuspecting public, for the bridge was actually contracted for, and supplies for building the railroad accumulated on the Port Jervis side, or were transported across the Barrett wagon bridge. The railroad bridge was ordered from the firm of Terry & Tench of Steelton, Pa., and was completed July 30, 1898. It used the old stone piers of the 1854 bridge, but a new center pier replaced the old one, and a two span Pennsylvania type truss bridge, with a small additional girder bridge across a highway on the New York side was built, but this time not at the expense of the Erie.

The rails were laid and a connection made with the Erie in time for a train to be run across the bridge on Sept. 3, 1898, the train consisting of a small Porter saddle tank 0-4-0 with five flat cars loaded with officials, stockholders and prominent citizens of all the communities involved, while a large crowd lined the river on both banks.

Construction of the railroad then progressed towards Milford, the old right of way and grading of the Milford & Matamoras being still for the most part in place and quite usable, thereby cutting down on the cost per mile to a large degree. An engine shed was built at the edge of Matamoras, and to this shed were brought the two locomotives which were to operate the line. These giants, judging by descriptions of them found in the local newspapers, turned out to be two 2-4-4 midgets bought second hand from a Brooklyn dealer, who was selling off the steam power of the New York & Sea Beach R. R., a railroad in Brooklyn which had been acquired by the Brooklyn Rapid Transit in 1897 and electrified. No. 1 of the NY&SB was Baldwin No. 4064, built 5/1877, and No. 3 was Baldwin No. 7335, built in 1884. Both engines were very small, had capped stacks and extended smokeboxes. No. 3 had the bell mounted on the sandbox, giving it a look of being shorter than No. 1, although the two were similar in dimensions. They had four wheel tenders, and probably would have been satisfactory enough for the eight mile run to Milford, since that had been the approximate distance they had operated in Brooklyn. But these engines were doomed to a life of idleness for when the line reached a point opposite Buttermilk Falls, about 1½ miles south of the bridge, construction was stopped, for the very good reason that the money for the payroll was not forthcoming. The bridge

had used up all the capital invested in the road, and since Milford was not an industrial town, but a quiet, rural community of great charm and popularity as a vacation spot, there simply was not enough incentive to push the project to completion, even though another \$25,000 might have finished the job.

However, the road, such as there was of it, had a short period of usefulness. About a mile south of the bridge was a slide of fine shale rock in the mountainside west of the enginehouse, this rock making excellent roadbed ballast which was in great demand at the time. So a spur was built near the slide, and a large rock crushing plant was erected. That part of the line from the spur to the Erie junction at Port Jervis was then used to haul carload shipments of crushed rock.

In 1902 a total of 11,283 tons of freight were hauled over the bridge, which paid for the entire tax bill of the road and left a small surplus. The Erie furnished the motive power for this work, it being customary for a switch crew to come across the bridge and set out empties or pick up loads whenever required, rather than to have permanent engine crew on the MM&NY. Thus the two Baldwins and the Porter saddle tanker remained in the shed, awaiting the time when perhaps the road would be completed.

But again Mother Nature took a hand and settled once and for all the fate of the Milford railroad, for in February of 1904, a sudden thaw caused the ice to jam below the bridge, and when it went out, the small girder bridge on the New York side was undermined and fell from its piers, while the stone pier of the main bridge was also weakened. Then, a month later, after a very heavy rain, the river rose to the highest level it had attained in many years, partly inundating the City of Port Jervis, carrying away the Barrett wagon bridge and the MM&NY railroad bridge, leaving Matamoras temporarily marooned until a cable ferry could be put into service.

The final chapter in the story of the big bridge and the little railroad can be found in the Feb. 15, 1905 issue of the Port Jervis Gazette, which listed properties sold that day for unpaid taxes. "The largest amount bid was for one-half of the Matamoras Railroad bridge, which lies in the Delaware River and which brought \$313.00, and was knocked down to Patrick Hart, a junk dealer of Newburgh."

This should have sounded the death knell of the railroad, but like the last dying gasp of the gladiator, attempts were made to revive the project that same year, and publicity appeared from time to time regarding it. One of the Baldwins was fired up, and run over the line to the end of the track, the writer having witnessed one of these excursions of the little 2-4-4 with a flat car loaded with ties, while a few men made repairs to the track and cleared the weeds off the right of way. But the cost of replacing the bridge, as weighed against the anticipated revenue from the railroad, failed to entice any more investors, for in 1906 the road was officially abandoned, and never was a railroad more completely abandoned than the MM&NY.

For over 12 years the three locomotives remained in their shed, slowly rusting into useless junk, until finally the shed collapsed on top of the locomotives, so that parts of them could be seen sticking out of the ruins of the building. The writer recalls several trips with school companions of a Sunday afternoon, over to the engine shed in Matamoras, where one could climb over the locomotives with nobody to say "no". We even used pinch bars we found among the tools, and moved the engines back and forth, finally daring to move the Porter engine outside the swinging doors, which were not locked. Perhaps that was where our interest in railroads began; certainly it was stimulated by this privilege of playing with the bell, working the cab levers, and pretending to be the engineer at an age when such privileges mean a great deal.

In 1917, when there was a premium on scrap metal, the three locomotives were scrapped on the spot, and the junk hauled away by truck. The rails were pulled up at the same time, and except for traces of the 1870 roadbed here and there, this little known project into which more than \$200,000 was invested either willingly or unwillingly, has vanished from the scene.

#### References:

The Story of the Erie — by Edward H. Mott

Files of the Port Jervis Gazette and the Port Jervis Union,  
located in the library of the Minisink Valley Historical  
Society, at Port Jervis.

Poors and Moodys Manuals of Railroads.



# A Much Travelled Engine

## Pennsylvania R. R. No. 1053

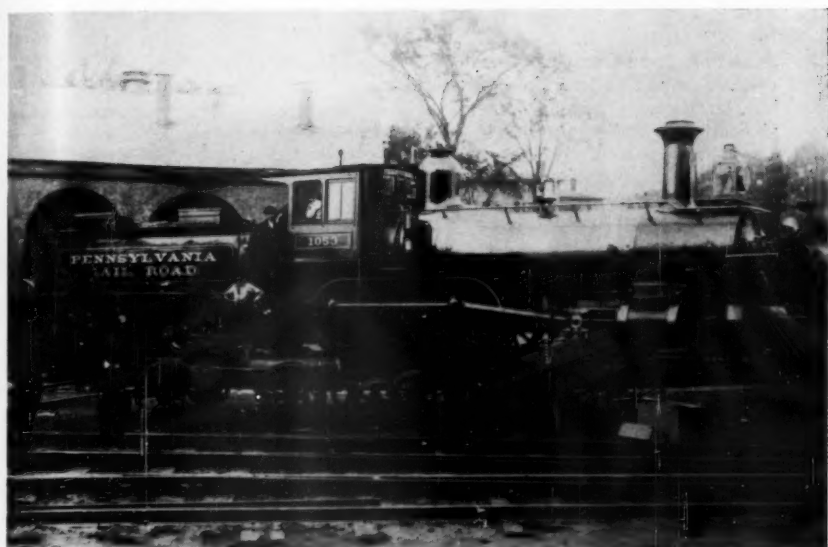
By CHAS. E. FISHER

During both World Wars I and II, it was not uncommon for one to see on the rails of our carriers, motive power and passenger equipment bearing the initials of ownership of some road considerable distance away. This was done under orders of the U. S. Railroad Administration or the Office of Defence Transportation — to place any surplus equipment where it was badly needed and was accomplished under a lease or rental agreement between the two carriers.

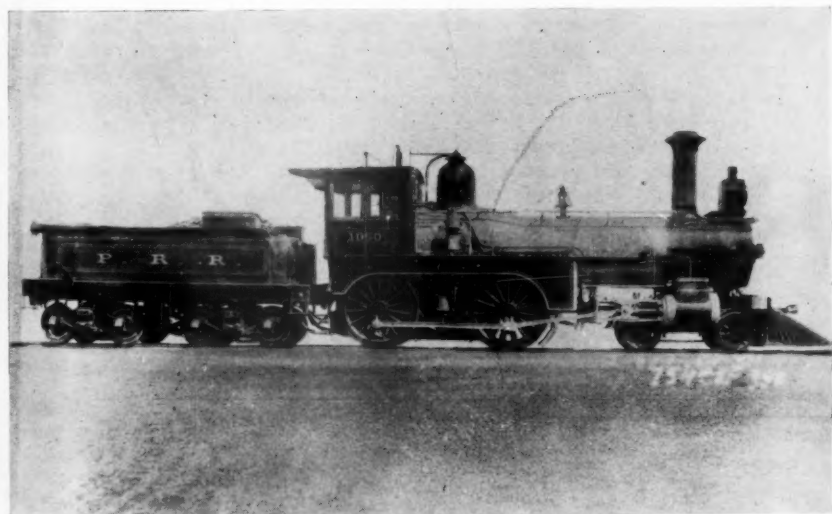
Prior to either war, it was seldom other than by agreement between two railroads, wherein one was permitted to use the tracks of the other, the former to furnish the motive power, passenger equipment and train crews, that the motive power and passenger equipment left the rails of the owner. Such an instance was the use of the Pere Marquette-Wabash Railroads, between Toledo, Ohio and Detroit, Michigan, to enable the Pennsylvania R. R. trains to enter Detroit. This continued until the P. R. R. built their own extension from Toledo but to this day it still uses the trackage rights over the Pere Marquette from the outskirts of Toledo to Carleton, a distance of 25 miles. Fifty years ago, our locomotives with their limited water and fuel capacity, traversing divisions much shorter than those now in vogue, generally "stayed at home." For this reason, any exception to the above, is of interest and perhaps our members may enjoy this brief account of Pennsylvania R. R. locomotive No. 1053.

In October of 1889, an International American Congress was held in Washington. Delegates came from Argentine Republic, Brazil, Chili, Columbia, Costa Rica, Ecuador, Guatemala, Hayti, Honduras, Mexico, Nicaragua, Paraguay, Salvador, Uruguay and Venezuela. These delegates, as guests of the United States, were taken on a tour of the various cities and towns so that they would realize the resources of this vast country.

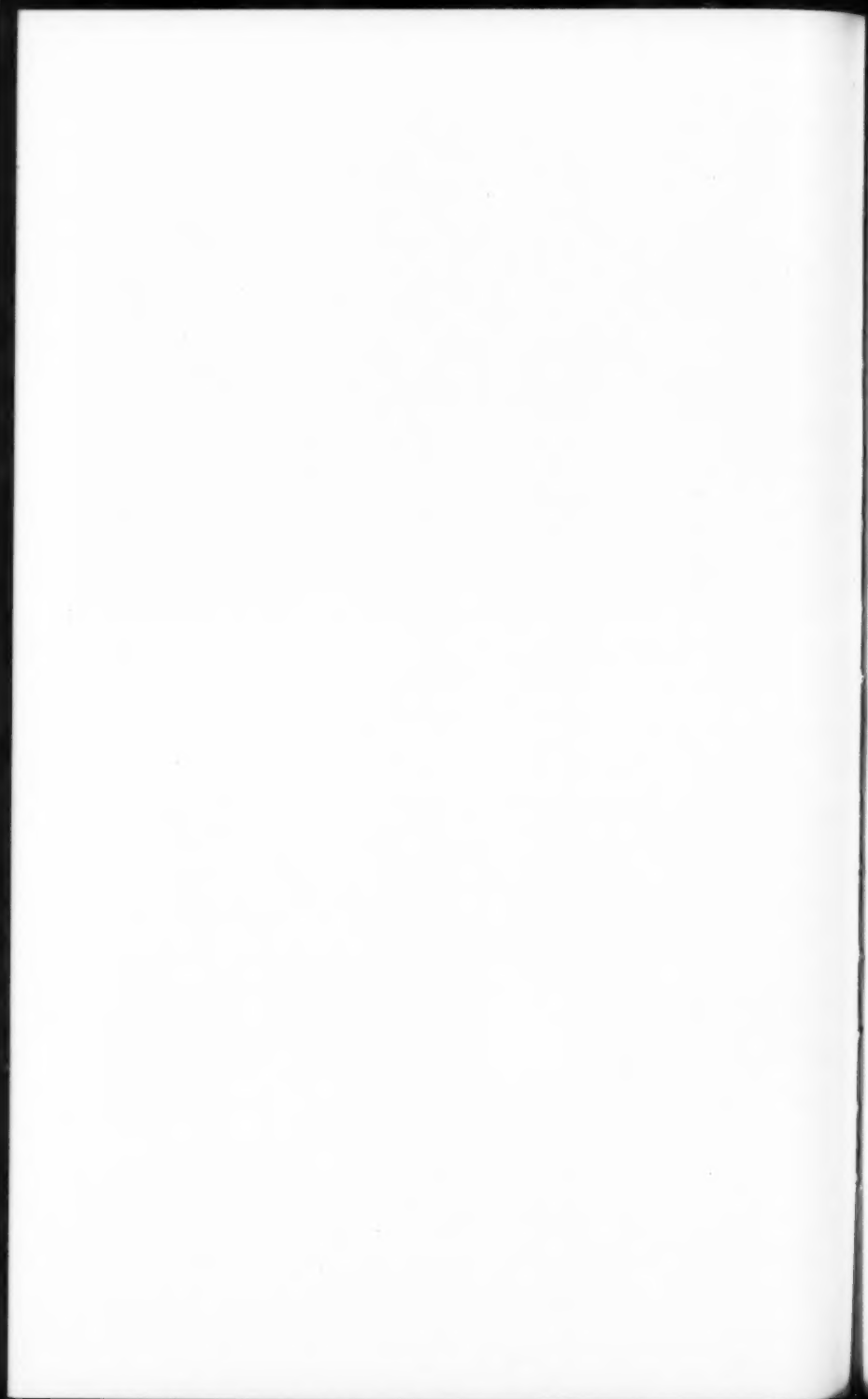
The Secretary of State, together with the officials of the Pennsylvania R. R., arranged to furnish a special train, together with the personnel for this 5000 mile tour. One locomotive was used throughout this entire trip — P. R. R. No. 1053. The train consisted of five Pullman vestibuled sleeping cars, a dining car and a car containing a baggage room, barber shop and smoking room. The consist of the train was similar to that of the "New York and Chicago Limited" of the Pennsylvania R. R. and the first car, or club car, was especially lettered with the name of the Congress being placed between the door of the baggage compartment and the first window. The train was lighted by electricity from a dynamo in the baggage car and, it is stated that even the locomotive headlight and tail lamps of the train were lighted from this same dynamo. The



P. R. R. No. 1053 at Hartford, Connecticut. — C. N. E. & W. No. 24 in the background.



P. R. R. No. 1050 with standard lettering.



Pennsylvania R. R. furnished a crew of 28 men — including five cooks, five waiters and a conductor for the dining car. The Pennsylvania's crew ran the train throughout the entire trip, being assisted on the other roads by pilots, and relays of P. R. R. trainmen were provided so that the train could run by night as well as by day. The tender of the locomotive, instead of being adorned with the conventional P. R. R., in vogue at that time, was lettered with the full name of the road, as shown in the illustration. The itinery covered 5406 miles and lasted 42 days.

Promptly at 8:15 A. M., on Oct. 3rd, 1889, the special train left Washington, enroute to West Point, N. Y. Leaving the "home road" just outside of Jersey City, N. J., the train proceeded over the tracks of the old West Shore R. R. to West Point. After a visit to the United States Military Academy, on the 4th, the delegates were taken on a government vessel for a trip down the historic Hudson River to New York. That evening they were placed aboard the Fall River Line Steamship "Puritan" for Fall River. After dropping the delegates at West Point, the No. 1053 proceeded northward via the N. Y. O. & W. to Maybrook, N. Y., then over the P. R. & N. E. via Poughkeepsie Bridge to Hartford, Ct., where the train spent the night. The next day, she proceeded via the New York & New England R. R., to Walpole, Jct. and thence over the Old Colony R. R. to Fall River, Mass.

Early in the A. M. of the 5th, the train picked up the delegates and brought them to the Park Square Station, Boston. The next day was Sunday and it was not until the 7th that the party visited Lawrence and Lowell; Manchester, N. H. on the 8th putting up at Portland, Maine that evening. Worcester, Mass., was visited on the 9th and then on to Willimantic, South Manchester and Hartford, Ct., via the N & W and N. Y. & N. E. roads. The next day, the 10th, Collinsville, Meriden and New Haven were visited, via the N. Y. N. H. & H. and, retracing their route on the 11th, the party visited Springfield and Holyoke, Mass., spending the night in Albany, via the B & A. On Oct. 12th, the delegates reached Niagara Falls, via the N. Y. C. & H. R. R. R.

Buffalo was visited on the 14th and Erie, Cleveland and Newburgh, Ohio, on the 15th, via the L. S. & M. S. The entire day of the 16th was spent in Cleveland. Oct. 17th was spent in Detroit and Ann Arbor, via the L. S. & M. S. and Michigan Central roads. On the 18th the delegates were in Grand Rapids, Michigan and on the 19th, they visited South Bend, Indiana. Three days were spent in Chicago and Milwaukee was reached on the 23rd, via the C. M. & St. P. R. R. From that point, the train continued to La Crosse and St. Paul and the latter place and Minneapolis included a two day visit — the 24th and 25th. Saturday, the 26th was spent in Sioux City. Omaha and Des Moines, Iowa, were visited on the 27th and 28th. The next two days were spent in St. Louis; the 31st was spent in Springfield, Illinois and the first day of November saw the delegates in Indianapolis, Ind. The 2nd was spent in Louisville, Ky., on the 3rd they visited Mammoth Cave and the 4th they were in Lexington, Ky. The 5th saw them in Cincinnati and the 6th they visited Mansfield, Ohio. Here the "home road" (Pennsylvania) was used for the balance of the trip — Nov 7th and 8th were spent in Pittsburgh, on

the 9th they visited Altoona; Philadelphia entertained the visitors on the 10th, 11th and 12th and on the 13th, Wednesday, the party returned to Washington, via Harrisburg.

This was the itinerary of the special train and there is every reason to believe the No. 1053 handled it the entire distance. The illustration proves it reached Hartford at the end of the first day; as a small boy, brought up in the "Old Colony country" — I seem to recollect some of the older men mentioning the visit of this engine and train. In later years, I recall on the B & A, men telling of this special going west over their road, but, they added, like all the others, she had to have a helper from Chester to Washington, Mass.

Of the Pennsylvania R. R. men that accompanied this train, an inquiry addressed to that road advises that they do not have this information. One of our members, Mr. Clarence Roberts, Retired Assistant Road Foreman of Engines of the Philadelphia Terminal Division of the P. R. R., is of the opinion that Andrew Chambers, Engineman and Edward D. Michael, fireman, both of the Philadelphia Division, were in charge of the No. 1053. Another crew, to relieve them, were S. K. Hart, Engineman of Altoona and Jack Tarr, fireman. Hart was a passenger engineer on the Pittsburgh Division and later, 1894 to about 1900, was also engineer, when needed, of the special engine, No. 930, used by the General Superintendent at Altoona, whose authority at that time, extended from Pittsburgh to 52nd St., Philadelphia, including all branches and connecting lines, save the Northern Central and Philadelphia & Erie roads. The officers special locomotive service at Philadelphia, seems to have been established previous to 1881 under the superintendency of Mr. William F. Lockard, Sup't., Philadelphia Division, March 1, 1867 to July 1, 1881. Andrew Chambers was its first engineman. His regular assignment then, was a Philadelphia-West Chester local; but he and his fireman were ordered out on the special when it ran. Chambers retired about the time of World War I and the special engines were discontinued about that time and were never restored. In later years, Chambers ran the No. 937, the General Manager's special engine and devoted all his time to this engine, holding no other run.

The locomotive No. 1053 was built in the Altoona Shops of the Pennsylvania R. R. in 1883. Built as a Class "O" locomotive reclassified D-8a, with 18 x 24" cylinders, 62" drivers, 130 lbs. pressure, 17.6 sq. ft. great area, 1392 sq. ft. heating surface, wt. on drivers 59000 lbs., wt. of engine 95000 lbs. and a tractive effort of 13860 lbs. Why she was selected to handle this special train, we will never learn at this late day. But we do know, subsequent to this long trip, she became the "special engine" of the Pittsburgh Division, at least as early as 1893, that she handled the special train of the Superintendent and Assistant Superintendent of the Pittsburgh Division, when they went over the road in private car No. 583 and that she was kept very much "dolloped up." Car No. 583 was also the pay car of this division and the No. 1053 handled it on this welcome trip, to the men at least, a trip that required three days. The present method of paying the men at station and other offices came in vogue about 1918 and the paymaster and his "special" is now only a memory.

In the summer time through the eighteen-nineties, the No. 1053 would be found on the "Cresson and Ebensburg Special." This train ran on Saturdays only, leaving Pittsburgh early in the afternoon, was usually a four car train and placed in service so that the Pittsburghers might find some relief from the sweltering heat. The "Mountain House" — also called the "Cresson Springs Hotel" was a large and swanky hotel at Cresson, atop the Alleghenies. At Ebensburg, eleven miles from Cresson, on a branch, were numerous hotels, perhaps not as swanky. At any rate, the change in elevation was a welcome relief from the heat and the No. 1053, on a rather fast schedule, furnished the motive power.

About 1904, she was pretty well worn out, for another engine of the same class, the No. 1054 was renumbered 1053, and became the special engine. She lasted two years and, in 1906, Juniata Shops built three new D-16b engines, Nos. 930, 937 and 1053, all alike, with many extra touches, as shown in the illustration of the No. 937 in Bulletin 65. The No. 930 was assigned to the Gen'l. Sup't. at Altoona; the No. 937 to the General Manager at Philadelphia and the No. 1053 to the Sup't. of the Pittsburgh Division at Pittsburgh. These new engines of 1906 replaced engines of the same numbers assigned to these officers and were the only engines built new for such service.

A word about the two other special engines may not be amiss here. Engines 926-937, twelve engines, were originally Class "G", reclassified D-5. They were of the 4-4-0 type, 15 x 22" cyl., 56" drivers, 125 lbs. pressure, 65200 lbs. wt. of engine and built in 1873. Five others of this class were built that replaced other numbers. Probably, because of their lightness, three of them, Nos. 929, 930 and 937, were subsequently selected as officer's engines, for hauling one or two cars and were assigned respectively, to the Sup't. of the Philadelphia Division, the Gen'l. Sup't. at Altoona and the General Manager at Philadelphia. In time, these little engines were discarded, but the engines that replaced them in the same service were renumbered to conform to this service. Besides the original D-5 engines, there were three 929s, two 930s and three 937s, each a later class than its predecessor. The engines built in 1906 were the last of the special engines and the only ones built especially for such service.

Whether there was ever another locomotive on the P. R. R., or any other railroad, that equalled such a trip as I have described, it is impossible to state. It was an unusual one and a lengthy one, we will all agree and if she could only have related her adventures as did Edwin C. Washburn's the "The 17," she would certainly have been able to relate much that would have been of interest to her "sisters."

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*Subsequent to the publication of Bulletin No. 68, a letter has been received from Mr. Chaney, author of the contribution on the Class "R" locomotive on the P. R. R., wherein he wishes to correct his statement relative to the location of the brake cylinders. These, on the H-3a and H-3b locomotives were always placed back of the engine cylinders. His statement in the bulletin applies to the other classes of this group.*

# Worth Reading

## — Books and Pamphlets —

Compiled by Elizabeth O. Cullen, Reference Librarian,  
Bureau of Railway Economics, Association of American Railroads, Washington 6, D. C.

**ANALYSIS OF RAILROAD OPERATIONS** — 2nd Edition, by *Joseph L. White*. xviii, 306 pp. Illus., charts, tables. Published by Simmons-Boardman Publishing Corp., New York 7, N. Y. \$5.00. "....The problem now before the railways is to appraise the volume and distribution of intercity freight and passenger traffic on all transportation agencies in the coming post-war years...." (Foreward)

**BOLL WEEVIL — RECOLLECTIONS OF THE TRINITY & BRAZOS VALLEY RAILWAY**, by *J. L. Allhands*. 279 (49) pp. Plates, illus., maps. Published by The Anson Jones Press, Houston, Texas. \$3.50. ".... The country tributary to this new line was agricultural and that agriculture was cotton. Here, in about 1902, the first generation of weevils began poking their snouts,....

....When it was remembered that this new jerkwater railroad had not been nicknamed, Lewis Mims, ...jocularly suggested that it be called THE BOLL WEEVIL. That nickname stuck. . . until the new and rejuvenated Trinity & Brazos Valley adopted THE VALLEY ROAD as its official name." (Foreward)

**BRIEF HISTORICAL REVIEW — JANUARY 1947**, by *Permanent Commission*, Pan-American Railway Congress, Paseo Colon No. 185, Buenos Aires, Argentina. 18 pp. Prices not stated. Officials and members of the Congress, pp. 3-8. Brief historical review, pp. 9-13. Official documents relating to the creation and organization of the Congress, reprinted, pp. 14-18.

**BRITISH RAILWAYS FACTS AND FIGURES — 1947** compiled (for the mainline railways and London Passenger Transport Board) by *British Railways' Press Office*, 2 Palace Chambers, Bridge St., Westminster S. W. 1, London, England. 28 pp. Price not stated. "Livery" p. 9, begins: "The colors of Main Line railway locomotives and trains are:..." "OUTSTANDING EVENTS" (1825-1945 pp. 20-22. "GLOSSARY OF RAILWAY TERMS" p. 27. "ANGLO-AMERICAN GLOSSARY" p. 28.

**CAR BUILDERS' CYCLOPEDIA OF AMERICAN PRACTICE — 1946**. 17TH EDITION compiled and edited for the Association of American Railroads—Mechanical Division. Editor: Roy V. Wright. 1444 pp. incl. illus., diagrams, tables, and bibliographies. Published by Simmons-Boardman Publishing Corporation, New York 7, N. Y. \$6.00. "... Many new designs of cars and appliances . . . have been made since the publication of the previous edition (in 1943). These have been included as far as possible



in order that this Edition might contain the latest practices in American Car Construction and Equipment . . ." (p. 4)

**DIESEL-ELECTRIC LOCOMOTIVE**, by *Charles F. Foell* and *M. E. Thompson*. Frontis., VIII, 688B pp. Illus., graphs, tables. Published by Diesel Publications, Inc., New York 16, N. Y. \$7.00 in U. S. A.; \$8.00 elsewhere. ". . . from a standing start 20 years ago, when the first Alco-G. E.-Ingersoll-Rand Diesel switcher was produced, this form of power has grown to where several thousand Diesel-electrics are in use on Class I railroads alone. . .

With the growth here outlined, it is reasonable to conclude there has arisen a demand for an authoritative book dealing with the Diesel electric locomotive. This book, therefore, is planned to give a factual, instructive presentation of the Diesel-electric locomotive; its history, advantages, engineering, construction, operation, general principles of maintenance, and selection to meet various conditions of expected use. The authors have presented basic materials . . ." (pp. V-VI)

**GRAND CENTRAL**, by *David Marshall*. xii (2), 280 pp. Illus. Published by Whittlesey House, McGraw-Hill Book Co., New York City. \$3.00. ". . . It's a big place, of course. But it's less remarkable for its daily average of six hundred trains and 180,000 passengers; more remarkable for its daily average of 370,000 people who simply walk through. . ." (p. 1)

**LOCOMOTIVE PUFFS FROM THE BACK SHOP (Poems)**, by *Leon R. Harris*. 56 pp. Published by Bruce Humphries, Inc., Boston, Mass. \$2.00.

**MEMORANDUM ON RAILROAD BRIDGES OVER NAVIGABLE STREAMS**, by *C. S. Duncan*, cover-title, 13 processed pp. Issued by Association of American Railroads, Washington 6, D. C. and available on request. Gives in chronological order the substance of federal legislation regarding construction and alteration of railroad bridges over "navigable streams" in the United States.

**MEN OF ERIE — A STORY OF HUMAN EFFORT**, by *Edward Hungerford*. xiv, 346 pp. Illus. and maps. Published by Random House, New York City and in Canada, Random House of Canada, Ltd. \$3.75. List of Erie presidents, p. 331.

**RAILROADING FROM THE REAR END**, by *S. Kip Farrington*. xvi, 430 pp. Illus. Published by Edward-McCann, Inc., New York City. \$5.00 ". . . The caboose is the field headquarters of the freight train, the command car. . ." (p. 1)

**RAILROADING IN FRANCE**, published by and available on request to French National Railroads, 610 Fifth Ave., New York 20, N. Y. 32 pp. Illus., maps, facsimiles. "SPEAKING OF RAILROADS — WHAT DO THE FRENCH SAY — THAT AMERICANS SHOULD UNDERSTAND" — glossary of French and American terms, pp. 29-31.

**SOVIET TRANSPORT — RAIL, AIR AND WATER**, by *V. Obrastsov* and others 63 pp. Illus. Published by Soviet News, London, England as one of its Illustrated Soviet Booklets. Price not stated.

**TRANSPORTION — A MEASUREMENT OF CIVILIZATION (and) LIGHT, LIFE, AND MAN**. ix, 236 pp. incl. ports. Vol. II of papers in The George Westinghouse Centennial Forum, May 16-18, 1946. Published by Whitteley House, McGraw-Hill Book Co., Inc., New York and London. \$2.50.

## — Articles in Periodicals —

**ANNUAL STATISTICAL AND OUTLOOK NUMBER, RAILWAY AGE**, JANUARY 4, 1947. Its Vol. 122, No. 1. 1-132, with advertising pages carrying out theme. Published by Simmons-Boardman Publishing Corp., 30 Church St., New York 7, N. Y. \$1.00. "RAILROADS ENTER A NEW ERA" — Editorials pp. 1-3. A REVIEW OF RAILWAY OPERATIONS IN 1946, by *Julius H. Parmelee*, pp. 58-67. "The Outlook" (for 1947) p. 67.

**THE HESITANT HERO OF JACKSON (Tennessee)**, by *Arthur W. Baum*. Saturday Evening Post, March 1, 1947, pp. 15-17, 43, 45-46, 48. Illus. Isaac Burton Tigrett, president of the Gulf, Mobile & Ohio Railroad. "... The temporary job as head of the lineal ancestor of his present railroad was handed to him in 1920 in a highly uncomplimentary manner. ...

But during the next twenty-seven years the country boy from Western Tennessee turned this 408 miles of rust into a 3000-mile railroad from Chicago to the Gulf. ... " (p. 16)

**INDUSTRIAL APPLICATIONS OF ATOMIC ENERGY**, by *Henry E. Stanton*. Journal of the Western Society of Engineers, December 1946, pp. 176-180. "... It is still theoretically feasible to use atomic energy for locomotives but in this case, we must be absolutely sure that collisions and other mishaps are completely avoided, because should the locomotive explode, this intense radioactivity would spread over the landscape making it inaccessible for months and killing every living thing in the area. ... " (p. 177)

**MOTIVE POWER OBSERVATION IN EUROPE**, by *J. E. Davenport*. Canadian Railway Club. Official Proceedings, January 13, 1947, pp. 34-51. "... I feel the best way to talk about motive power matters is to divide it into steam, Diesel electric and gas turbine, and I will attempt to do that by following the steam situation from one country to the other and do the same in regard to the Diesel Electric, and what little there is of the gas turbine. ... "

**OUR RAILROADS: A BALANCE SHEET**, by *Robert V. Fletcher*. Atlantic Monthly, March 1, 1947, pp. 73-78.

**A PLAN FOR THE STUDY OF BUSINESS THINKING**, by *Thomas C. Cochran*. Political Science Quarterly, March 1947, pp. 82-90. "... it seemed best to choose an important group of business leaders with a representative group of problems to cover a limited period, ... and to

select an industry in which a considerable amount of confidential material is readily available. After some discussion with the Committee on Research in Economic History of the Social Science Research Council. . . the thinking of railroad business men from 1840 to 1890, . . . was selected for this trial analysis . . ." (pp. 83-84)

PROGRESS IN RAILWAY MECHANICAL ENGINEERING 1945-1946 — REPORT OF RR-6, SURVEY. T. F. PERKINSON, CHAIRMAN. Mechanical Engineering, March 1947, pp. 199-212. Illus. and diagrs. Contributed by Railroad Division, American Society of Mechanical Engineers, to annual meeting, New York, 1946. Steam locomotives, pp. 199-202. Electric locomotives, pp. 204-206. Diesel-electric locomotives, pp. 206-208. Railway-car construction and development, pp. 208-211. Hot box alarms, p. 211. Research on coal-burning gas-turbines, pp. 211-212.

RAILROAD LIBRARIES, by *Elizabeth O. Cullen*. Wilson Library Bulletin, March 1947, pp. 552, 556.

RAILROADING — OLD WORLD AND NEW, by *General Carl R. Gray, Jr.* New England Railroad Club Proceedings, January 15, 1947, pp. 144-153. "... Most of us (in the Military Railway Service) served in some eighteen countries and saw a good many miles of railroads. I am sure all of us think that any one mile of our railroads is better than any we saw abroad. There are reasons for that in my opinion. They are basic.

One thing that is fundamentally basic, I think, is that about all of the railroads in Europe are state-owned, while we operate under the free enterprise and private ownership system which develops men. . . . It has made our railroads what they are . . ."

RAILWAY PROGRESS. VOL. 1, MARCH 1947. *R. S. Marshall*, editor. Published by Federation for Railway Progress. "... distributed only to members." Address inquiries to P. O. Box 6539, Terminal Tower, Cleveland 1, Ohio.

THE ROLE OF THE RAILWAYS IN THE RE-ESTABLISHMENT OF INTERNATIONAL TRAFFIC, by *C. E. R. Sherrington*. Annales Suisses d'Economie des Transports, Zurich, Switzerland, 1946, No. 4, pp. 293-308. "INTERNATIONAL MOVEMENTS" pp. 299-300. "SWITZERLAND AS THE RAILWAY TURNTABLE OF EUROPE" pp. 300-302, mentions "... Geographically it is so located as to be legitimately regarded as the turntable of the international train services of Western Europe. . . . Few will deny the pre-eminence which may be claimed by Basle as probably the most important single international railway centre of Western Europe; . . .

But Switzerland, apart from its unique geographical location, or perhaps because of it, has other claims to importance in the sphere of the international traffic movements of Europe, and particularly Western Europe . . ." pp. 301-302. "METHODS TO REVIVE INTERNATIONAL TRAFFIC Flow" pp. 302-305.

**TRAIN WIRES TO THE HORIZON**, by *Ethne M. Kennedy*. Railroad Magazine March 1947, pp. 8-38. Illustrations showing early types of telegraph instruments and stations, portraits of men who developed railroad telegraphy and facsimiles of famous messages. "... At present, train operations on 145,647 miles of road ... are being directed by telephone and the figure is steadily mounting. The telegraph still holds down 71,572 miles of despatching territory, while teleprinters are carrying the bulk of company business and inter office communications. But if the newcomer (radio facsimile telegraphy) lives up to the present tests and predictions, the capacity of communication lanes can be stepped up to one thousand messages a minute projected in opposite directions simultaneously. . . ." (p. 9)

## New Books

**MEN OF ERIE**, by *Edward Hungerford*, 346 pages, 8½ x 5½, illustrated. Bound in cloth. Published by Random House, New York, N. Y. Price \$3.75.

Probably no road has passed through more vicissitudes than our old friend — the Erie. Sixty-nine years without dividends, years filled with high hopes and ambitions, years actually filled with heart-breaks and misfortune, but years of service to the best of its ability.

The Erie is a story of its men, some serving faithfully, others faithlessly. Eleazor Lord, an ordained minister, never occupied a pulpit, placed his faith in the new *iron horse* to become its first leader. James Gore King aided in its construction and Benjamin Loder, who completed the task, followed. Under the Gould regime came mismanagement and then came its regeneration under such men as Fred Underwood, John J. Bernet, Charles E. Denny and present chief executive, Robert E. Woodruff.

We see the road struggling across the southern tier of counties of New York State until it finally reaches Lake Erie. The grand opening, with all of the notables — Millard Fillmore, President of the United States and many other others. Yes, Daniel Webster, Secretary of State, with his rocking chair securely lashed to the floor of a flat car, viewed the road on the opening day. The road expands westward but is constantly hampered with its six-foot gauge, the blunder of Eleazor Lord Plundered under the Gould regime, in the years that followed, its locomotives and rolling stock might be classified almost as museum pieces. Erie was down, but not quite out.

The present road is a far cry from what it was back in 1901, when Fred Underwood took over. It took courage and vision to manage this property and bring it to its present high operating standards. Old equipment and rolling stock was discarded and new units succeeded them. Unprofitable branches were lopped off, new cut-offs built where grades were difficult, curves eliminated, new iron laid — in fact the road was practically rebuilt and newly equipped. Today, this road handles 98 per cent of the citrus and deciduous fruits that come in the New York wholesale markets. It has built up and it maintains a fine commuter business from its terminal in Jersey City. The wide clearances of its former six-foot gauge, enables it to have greater clearances than the majority of our eastern lines, and Erie, is essentially a freight road and a busy one at that.

The author has given us a sweeping story of this railroad from the date of its charter to the present day. Starrucca Viaduct and Kinsua Bridge, both majestic landmarks, tho' ancient are still sturdy. We enjoy

a ride on "Erie 98" — their fast east-bound freight and the next time we travel between New York and Chicago, we might well take the *Erie Limited* — not so fast as the trains on some of the other roads, but presenting an opportunity to see a fine railroad and some unexcelled scenery.

Numerous woodcuts and photographs liven the text, the index helps find the salient facts and, our member, Edward Hungerford, should be congratulated for having written another valuable and interesting book of railroad history.

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THE MODERN WONDER BOOK OF TRAINS AND RAILROADING, by Norman Carlisle, 289 pages, 6½ x 9½, illustrated. Bound in cloth. Published by John C. Winston Co., Philadelphia, Pa. Price \$2.50.

The author has tried to paint the picture of the development of our American railroads, from their inception in this country, to the present day. Commencing with the early history of the railroad, we are brought through their days of construction, to the development of the west, on to the present day, with its multitude of details. There is a short chapter on model railroads and another on railroad slang. All in all, the author has succeeded in tracing their origin and history, their why and wherefore and what makes a great railroad "tick." It is a book that should appeal to the younger generation with special interest and these future citizens need some encouragement to become interested in the "iron highway."

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Although not properly under this heading, our members may be interested in the literary efforts of one of our members, Mr. Elmer G. Sulzer, Head of the Department of Radio Arts, University of Kentucky, Lexington, Ky. A few years ago Mr. Sulzer commenced a series of articles that appeared in the KENTUCKY ENGINEER on the small and now abandoned railroads of that state. To date five articles have appeared: No. 1, The Maloney Branch, May, 1945; No. 2, The Mountain Central, August, 1945; No. 3, The R. N. I. & B., February, 1946; No. 4, The Ohio & Kentucky, August, 1946 and No. 5, The Cincinnati & Green River; the Kentucky Northern and the Kentucky, Rockcastle & Green River, February, 1947. Copies of the "Kentucky Engineer" containing these articles may be procured from Mr. Sulzer, price 50 cents each. We hope that some day they will all be published in book form. Mr. Sulzer will welcome any assistance that our members can give him in the loan of prints to illustrate future articles.

## Annual Meeting

The Annual Meeting of this Society was held in the Hotel Bellevue, Beacon St., Boston, Massachusetts, on May 4th, 1947, with Messrs. Becker, Cole, Fisher, Fogg, Forsythe, Jacobs, Merrill and Walker from Boston, present and Messrs. Gaynor, Graves, Hungerford and Schmid from New York, with LaMar M. Kelley from Elkhart, Indiana, present.

The reports of the officers as read and printed were approved together with the report of Warren Jacobs on the marker of the grave of Asa R. Porter. The committee in charge of our Anniversary Dinner was given a vote of thanks.

With the view of handling such manuscripts prepared by our members that might be too large to conform to our present limitations, the Directors authorized the Publication Committee, should the instance arise, to create a new series of publications, authorizing the committee to borrow from the Life Membership fund and placing the limit of \$5.00 upon the non-membership price of such a publication, a lower price for our members. The amount borrowed to be replaced, together with the interest lost, in the Life Membership fund and these publications will not be included in the dues of any of our memberships.

Mr. Hungerford outlined possibilities in the matter of a railroad museum and he was also appointed to take steps in the matter of protecting the No. 952 from the weather.

Mr. Merrill, our Curator, was selected to get in touch with the authorities of the Harvard Business School, relative to the re-establishment of our museum, and report at the next Annual Meeting.

The Directors created a new office — Vice President at Large tendering same to Mr. Hungerford, which he accepted.

The following gentlemen were elected to serve as Directors of this Society for the ensuing year; George P. Becker, Dr. Arthur H. Cole, Charles E. Fisher, Walter R. Fogg, Edward Hungerford, Warren Jacobs, John W. Merrill, Robert C. Schmid, Harold S. Walker, Sidney Withington and Rogers E. M. Whitaker.

Immediately following the Annual Meeting, the directors elected the following to serve as officers until the next Annual Meeting: Charles E. Fisher, President; Sidney Withington, Vice President; Warren Jacobs, Secretary; Harold S. Walker, Financial Secretary and George P. Becker, Treasurer.

The meeting adjourned at 4:20 P. M.

May 7th, 1947.

WARREN JACOBS, *Secretary*



# Our Silver Anniversary Dinner

Your Society celebrated its twenty-fifth anniversary with a dinner held December 11, 1946, in the University Club, New York City. It not only marked that anniversary but it was the first dinner held by the parent Society.

It was a deep source of gratification, not only the way our members in the vicinity of New York turned out for this gathering, but, members came all the way from San Francisco, Golden, Colo., Chicago, Milwaukee, St. Louis and Bluefield, W. Va., to mention some of the places. Perhaps after twenty-five years of effort, we have builded better than we thought possible at the time of its inception.

Col. Robert S. Henry, Assistant to the President, Association of the American Railroads and Lucius Beebe were the speakers. After a convenient break in the program, "Ed" Hungerford furnished movies from "Railroads on Parade" and the "Fair of the Iron Horse." Tom Scott and Frank Warner entertained with railroad folk songs and our members had an opportunity of chatting and getting acquainted before the dinner.

In 1946, three American railroads passed the century mark and scrolls were awarded and accepted by John Duffy, Vice President, Traffic, Lehigh Valley R. R.; Carl L. Jellinghaus, Vice President, Michigan Central R. R. and J. C. White, Vice President, Pennsylvania R. R. The Society received fitting anniversary material from each of these three railroads.

I am sure that our membership will be interested in our guests as well as in those that attended. At the

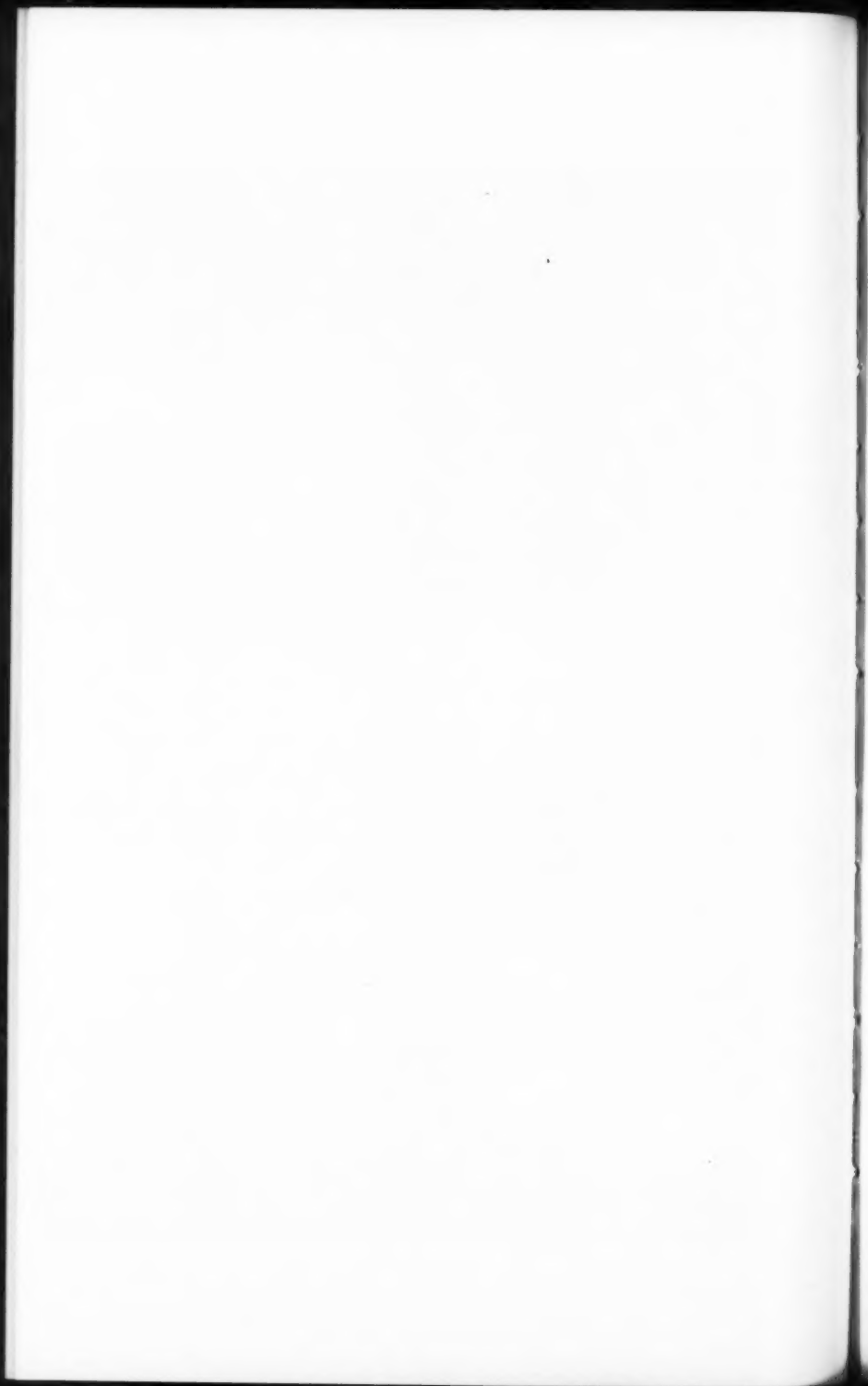
## *Speaker's Table*

From left to right: D. W. Yungmeyer, Resident Vice President, Chicago, R. & L. H. S.; Sidney Withington, Chief Electrical Engineer, N. Y. N. H. & H. R. R. and Vice President, R. & L. H. S.; John Duffy, Vice President, Traffic, Lehigh Valley Railroad; Elmer R. Jones, President, Wells, Fargo Co.; Carl L. Jellinghaus, Vice President, Michigan Central R. R., New York Central System; Lucius M. Beebe, Author, Columnist, Traveller; Col. Robert S. Henry, Assistant to the President, Association of American Railroads; F. R. Gerard, President, Lehigh Valley Railroad; Harold S. Vanderbilt, Director and Member of the Executive Committee, New York Central System; Charles E. Fisher, President, R. & L. H. S.; Edward Hungerford, Editor, "Travel America Magazine," Author, Director, R. & L. H. S.; Dr. Charles Penrose, Senior Vice President for America, the Newcomen Society of England in North



#### AT THE SILVER ANNIVERSARY DINNER

L. to R. Mr. F. R. Gerard, President, Lehigh Valley R. R.; Col. Robert S. Henry, Asst. to the President, Ass'n of American Railroads; Mr. Harold S. Vanderbilt, Director, and Member of the Executive Committee, New York Central System; Carl L. Jellineau, Vice President, Michigan Central; J. C. McQuinn, President, Erie R. R.; J. C. White, Vice President, Pennsylvania R. R.; J. C. White, Vice President, Pennsylvania R. R.; J. C. White, Vice President, Pennsylvania R. R.; J. C. White, Vice President, Pennsylvania R. R.



America; J. C. White, Vice President, Pennsylvania R. R.; R. K. Paynter, Treasurer, New York Life Insurance Co.; John W. Barriger, President, Monon Route; R. C. Morse, Vice President, Pennsylvania R. R.; J. W. Smith, Vice President, Boston & Maine R. R.; Jack Walker, Oahu Railway, Hawaii and Gilbert H. Kneiss, Resident Vice President, San Francisco, R. & L. H. S.

### *Table I*

A. H. Ahrens, Mac G. Collins, Fred E. Dayton, Harry W. Frier, Arthur J. G. Illian, Malcolm Lowe, Harry Maule, Eguene P. Spaulding and Rogers E. M. Whitaker.

### *Table II*

George W. Armstrong, Charles M. Clegg, Joseph P. S. Duffy, John F. Guinan, Freeman H. Hubbard, Fred P. Huston, A. C. Kalmbach, Ted O'Mera, C. B. Peck and Stanley W. Todd.

### *Table III*

Paul A. Bissell, William N. Bissell, Robert S. Chamberlain, Warren Jacobs, Edgar T. Mead, Dr. William H. Ordway, Carlisle B. Tuttle, Samuel Vaughan, Sr. and Samuel Vaughan, Jr.

### *Table IV*

Dr. Arthur H. Cole, William J. Dixon, Charles O. Egerton, Clair L. Foster, Fred C. Hill, William F. Kenney, H. E. Nichols, Charles S. Ryland and Philip S. Van Wyck.

### *Table V*

John Carter, Robert B. Decker, John Goriany, H. E. Hale, W. R. Hicks, George L. Larned, William C. Moore, Pred W. Piper, Philip A. Ronfor and Edward F. Sweeney.

### *Table VI*

F. L. Blewer, Walter H. Brown, R. L. Coulter, W. Arthur Grotz, J. G. Lyne, Hilton M. Moore, Frank C. Nesbit, E. A. Schmidt, Carroll M. Shanks and Harold A. Smith.

### *Table VII*

Spencer Armstrong, Martin J. Alger, Jay Bonafield, Howard Fogg, J. H. Hustis, J. A. MacLean, Lynn Mahan, Willard F. Place, Ward C. Shafer and R. D. Starbuck.

### *Table VIII*

John H. Carmical, Eugene DuBois, J. F. Finnegan, Howard N. Guthrie, W. T. Phillips, John Gibb Smith, Jr., Willman Spawn, Fred B. Stauffer, R. W. G. Vail and Herbert Loyd Weir.

### *Table IX*

R. E. Gaugh, H. R. German, C. M. Johnke, G. T. McCleary, J. P. McDonald, A. C. McIntyre, D. J. Mullane, M. J. Ormond, C. L. Patterson and Norman W. Pringle.

### *Table X*

Carroll Bateman, George W. Becker, C. B. Freeman, Arthur Gnaedinger, L. B. Gnaedinger, W. J. Honan, Paul S. Phenix, Lawrence W. Sagle, Charles M. Shriver and H. I. Walton.

### *Table XI*

Robert B. Adams, A. J. Boyle, Don Buchholz, Edward J. Colgan, Robert Franklin, Elmer Hoffman, W. S. Webber, George B. Whitfield, James W. Speer and Lansing Vail.

### *Table XII*

R. A. Erickson, Alvin F. Harlow, Gustav Kaiser, Robert Knittel, J. J. McCormack, T. J. McLernon, Hudson F. Meyer, E. F. Neagle, Franklin Snow and J. F. Yerger.

### *Table XIV*

Romeyn Balsley, Dr. Robert R. Chace, Morris H. Cohn, R. H. Gillespie, Arthur T. Knowles, Dr. John P. Macnie, C. L. V. Meeks, J. W. Meyer, Kenneth R. Pennie and Henry T. Wilhelm.

### *Table XV*

Fredrick G. Beach, J. H. Bodenlos, James P. Dervin, H. W. Faus, D. A. Fawcett, Carl F. Graves, N. W. Hawkes, Robert C. Schmid, F. H. Woolfall and Edward J. Zschirpe.

### *Table XVI*

C. T. Aronson, Paul A. Danielson, Howard W. Dayton, Horace H. Delano, Paul Folger, William T. Gaynor, Franklin W. Krout, Arthur C. Mack, William H. Tate and A. J. Wall.

### *Table XIX*

William L. Benson, H. G. Clopper, Sr., H. G. Clopper, Jr., Carl Conrad, David Hyde, F. W. MacMullen, Tom Scott, Frank M. Warner and W. W. Willock, Jr.

And finally, amongst the many congratulations that were accorded your Society, came the following, all the way from the Pacific Coast:

*"Congratulations to the Society on its 25th anniversary. While you boys are cutting the cake and listening to those hilarious after-dinner stories, we will all be huddled about the caboose stove*

*dunking eight by ten negatives in our coffee and toasting to the continued success of the Railway and Locomotive Historical Society.*

#### THE GRIZZLE FLATS RAILROAD

Ward Kimball, 'Jerry' Best and 'Dick' Jackson."

To our Committee, Messrs Edward Hungerford, Chairman, Toastmaster and Master of Ceremonies, W. T. Gaynor, Robert C. Schmid and Rogers E. M. Whitaker, we owe much to the success of this dinner and we deeply appreciate the loyalty of our members and their guests. Here's hoping we will not wait twenty-five more years to have another!

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## In Memory of

EDWARD H. AHRENS

*Annual Member*

71 Vanderbilt Ave., New York, N. Y.,  
who died on February 2nd, 1947.

THE REVEREND EDWARD MILLER JEFFERYS

*Honorary Member*

Wheel Pump Lane, Chestnut Hill, Philadelphia, Pa.,  
who died on August 15th, 1946.

MELLEN C. M. HATCH

*Annual Member*

74 Commercial St., Provincetown, Mass.,  
who died on April 5th, 1947.

FREDERICK H. NEWHALL

*Contributing Member*

111 Devonshire St., Boston, Mass.,  
who died on March 12th, 1947.

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# In Memory of

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